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ABSTRACT

The guide is designed to give practical suggestions to the classroom teacher on the teaching of health with suggestions on scope and sequence of coverage, selection of materials, establishment of policy, and focusing on needs and interests. The principles of health education are discussed. The majority of the guide covers seventeen health instruction areas, each with an introductory rationale, basic concept, suggested pupil outcomes, and suggested pupil-teacher activities keyed to concepts by grade level from kindergarten through grade 13. Shorter sections cover evaluation, school health services and environment, and selected materials and their sources. (MS)

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Conceptual Guidelines for School Health Programs in Pennsylvania

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A
Program Continuum
for
Total School Health

Pennsylvania Department of Education 1970

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CONCEPTUAL GUIDELINES
for
SCHOOL HEALTH PROGRAMS
in PENNSYLVANIA

A Program Continuum for Total School Health

BUREAU of GENERAL and ACADEMIC EDUCATION
DIVISION of HEALTH, PHYSICAL and CONSERVATION EDUCATION
PENNSYLVANIA DEPARTMENT of EDUCATION

FEBRUARY, 1970

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Preface

The Pennsylvania Department of Education has evaluated the growing need for not only a broader, but also a more realistic and meaningful health program in terms of the individual and his environment.

To assist in implementing health instruction most effectively, a new curriculum guide has evolved. The format includes not only the traditional presentation of the health instruction units, but also includes suggestions for the administration of a proper school environment and has set down, through an exploration of school health services, agencies which assist in the safeguarding and promotion of healthful school living. Total health instruction requires the proper integration of these areas, health instruction, health services, and healthful school environment. The concept of total health is aimed toward a healthful being, functioning capably and worthily; interacting maturely and responsibly with every aspect of his environment; capable of making prudent decisions that are of benefit to himself and to the society to which he belongs.

Health education has, in the past, presented factual knowledge clearly and validly, but, however sincere, has been inadequate in serving young people in their need to interpret and resolve the health problems of a complex world. To build, then, a penetrating understanding of every implication of total health, this guide attempts to present a program that will assist in developing concepts and objectives, new and old, needed resources to reinforce these concepts and objectives and, hopefully, to be of practical assistance in the development of an individual wholly cognizant of his own human dignity and mindful of the dignity of every other man.

Every effort has been made to present this material as usefully and as effectively as possible, but it seems appropriate to make the recommendation that any guide is only as effective as the educator will creatively effect is use. It must be evaluated in the specific framework of local and individual needs. It is, hopefully, a foundation. The educator will be the real and ultimate facilitator of the school health program.

INTRODUCTION

Just Another Guide?

With your heavy schedule and volume of material to be constantly reviewed, you may wonder why:

Another Guide, what is its purpose?

Are there basic inadequacies in health education? If so, what are they?

The term CONCEPT has been frequently used. What does it mean?

How does concept differ semantically from basic principle, which, as good teachers we have been accustomed to incorporate in our thinking in the past?

There seems to be more, glancing through the Guide, than we've taught in the past. Does this mean there are more subjects to be taught by law?

If there are no new laws, then why can't we determine our own curriculum content?

Can we ignore certain areas of health need because to cover them is distasteful to the teachers involved, or the community?

If we cannot objectively ignore certain subjects, then actually, what choice do we have in adapting the Guide to local needs?

Is the answer to the above more of the nature of timing?

Is there a rationale to the approach of teaching health understandings based on the growth and development of children and the influence of their environment?

How can the teachers and the schools prepare themselves for the adaptation of the Guide to their school's needs?

Is it necessary to involve parents or other segments of the community in health education programs?

Would it be better if more than one teacher were involved in health instruction? The team approach?

Who should be on the team, and how do the health service personnel relate to health education?

Is there a uniform approach for each topic and is there a reason for the sequence for topic presentation?

We have been accustomed to testing objectively in the area of health education, but is this a measure of our teaching, student memorization, or student understanding?

How can we find out whether the children understand matters of health sufficiently for it to affect their attitude and behavior?

You may have other questions — the above are just a few which portions of this Guide will attempt to investigate.

Goals and Objectives

There are numerous reasons which could be stated to justify the development of a different approach to health education.

For some the goal might be:

To develop and maintain good mental and physical health and health habits.

To understand their own problems of physical and mental growth.

To bridge the gap between knowing and doing.

To understand that goals of good health result from individual practices.

To develop a responsibility toward community health.

To identify and, if possible, correct remediable defects.

To appreciate the value of a healthful life.

It is hoped that the Guide will:

Give practical suggestions to the classroom teacher on the teaching of health.

Offer suggestions on scope and sequence of health understanding.

Offer suggestions on ways to discover individual health needs and interests of children.

Offer recommendations in the selection and use of materials and resources in health teaching or programming.

Give suggestions to school administrators and supervisors for establishing policies and for organizing comprehensive school health programs.

Assist schools which desire to analyze their local needs and design a program of health education congruent to these needs.

Serve as a basis for evaluation of established programs and as an aid for continuous evaluation in health education.

Center the focus of health education on expected learner needs and behaviors.

Section One

Principles of Health Education

HEALTH EDUCATION — A STATEMENT OF PHILOSOPHY

Traditionally, man has been concerned with the interaction of his body and environment, and the premise has been that physical health is an end in itself. Needless to say, an understanding of man's biologic problems, the means to physical health, the nature of diseases and the signs and symptoms suggesting ill health are a vital part of the understanding of everyone. However, physical health is in itself only a means to an end. Man cannot only be concerned with the shell which separates him from his environment, but with the contents as well.

The concept of total health implies an understanding of a sound body and the appreciation of one's potential capabilities and individual worth, such as to permit the expression of an individual's creativity and permit the dignity and satisfaction that comes only through one's individual abitity to give of himself. It is not enough to expect that man may assume the state of total health alone, for each of us is, in addition, a function of our environment. Approaches to total health must employ parallel programs, in an ideal situation, aimed at children and their families, as other elements of their environment; and also evolve new understandings on the part of teachers and school administrators.

It is not enough to suppose that man must develop new concepts to bring about the understanding referred to without simultaneously supposing that there will be available new approaches to teaching, new curriculum and audio-visual materials and a staff of individuals who will fully appreciate their capacity to aid the youngster in understanding himself. A basic orientation presumes that the responsibilities of the teacher, be he in a school, a church or the community at large, is but to help the child understand and analyze what he observes and interprets to be health practices of the adults in the community, from whose behavior he primarily learns. The successful realization of education for health must be the result of a combined effort of individuals who mutually complement the activities of each other, supplement the information offered and reinforce the attitudes developed in youth by challenging them to think. The basic question to be answered relates to whether we are seeking to develop a community of technicians who later appreciate their value as individuals or a community of persons who have, incidentally, additional individual value as technicians.

To establish programs in health education without providing for continuous expansion of understanding regarding the specific areas of health would be incongruent with sound curriculum practices. It would be unwise to establish health education and at the same time dissociate the teaching of health from the many resources through which new knowledge becomes available. It would be fallacious to presume that teaching of health as any other subject could be the responsibility of those ill-prepared or as a correlary that training in education is in itself sufficient preparation. It would be incompatible with integrated concepts of health to presume that these could come about by separating and dissociating physical from mental health. Less than the optimum must result when the basic orientation of an individual's understanding is physically directed rather than "total person" in nature. Whereas, the field of mental health encompasses programs of immeasurable significance, it is not initially conducive to the best understanding of a student to discover himself categorized into human sub-divisions of physical and mental attributes. It is not conducive to his understanding of his personal significance and potential value to have this understanding be a function of teaching by directive rather than discovery. The student who is an individual because of a mask of unreality is hardly the same individual as one who discovers that he is, even in the confines of reality.

The orientation of content materials is offered from the perspective of total understanding which secondarily can be anaylzed in terms of its component parts. It is hoped that as a product of the health education programs, the student will conceive an image of himself as a being embodying all of the understanding regarding optimum health. This image of himself or of a specific aspect of health as applied to himself will, in fact, be the concept which we refer to. It may very well be that the only way in which he can demonstrate his understanding of concept is through personal behavior rather than an ability to verbally communicate the abstract to those who would choose to measure his achievement.

Good health is not accidental, but rather a product of nature and culture, and must be related to understanding and values. Good health must not only be philosophical, but capable of extension into the realities of daily living. Good health and related understanding should not be, and must not remain, the right of a privileged few. It is to this end that the Department of Education, assisted by the State Health Education Advisory Committee, has undertaken to prepare a guide for the sharing of basic concepts and objectives relevant to health education.

HEALTH EDUCATION IN EDUCATION

Through the years the term health has taken on many different meanings. In ancient societies physical well-being and rules for hygiene were stressed. A somewhat broader notion of health began to appear in the 17th and 18th centuries. It was during this period that John Locke wrote his oft quoted phrase, "A sound mind in a sound body is a short but full description of a happy state in this world; he that has these two has little to wish for."

Somewhat later, around the middle of the 19th century, Horace Mann, then serving as secretary to the first board of education in the United States in Massachusetts, was instrumental in stressing the importance of physical well-being and emphasizing health education.

However, mental, and social well-being, were not appreciably emphasized until the middle of the 20th century. Through the years broader and more complete meanings of health have evolved. Today our society is concerned not only with curing or treating sickness or the

prevention of disease, but is also more importantly concerned with raising the level of individual health and well-being.

Health is now considered to be a dynamic quality of life rather than a static entity. It is the result of the interaction of many factors and conditions. Hoyman emphasizes this when he refers to health as: " ... a moving target ... a dynamic ecologic resultant involving the interaction of many factors and conditions ..."(3)

Health is no longer considered a continuum of physical well being or of mental or social well being, but a combination of all three, dynamically interrelated. The individual functions as a whole, or as an integrated individual with each dimension of health having an influence upon the other dimension. That is, physical illness has an effect on one's emotional well-being as well as having an effect on one's social relationships. The psychosomatic aspects of health also illustrate the dynamic interrelationship between these various dimensions of health. (4:15,16)

Educators have been consistently vocal in their expression of concern for the role of health education in education. One of the earlier and more important statements emanated from the 1918 report by the Commission on the Reorganization of Secondary Education appointed by the National Education Association. (10) The report declared health as one of the seven cardinal principles or outcomes of education.

The Educational Policies Commission (6) in its classic statement of 1938, *The Purpose of Education in American Democracy,* describes desired pupil outcomes in each of four groups of educational objectives: (a) self-realization; (b) human relationships; (c) economic efficiency; and (d) civic responsibility. In discussing education for self-realization, the Commission stated that the health-educated person is characterized as one who:

1. Understands the basic facts concerning health and disease.
2. Protects his own health and that of his dependents.
3. Works to improve the health of the community.

More recently, the Educational Policies Commission, (5) in *An Essay on Quality in Public Education,* stated that the elementary curriculum should, among other things, teach the essentials of safety and personal health and promote physical coordination and skill.

In a statement about the objectives of schools prepared by the American Council on Education, the objective of health education was also expressed. In the committee's judgment, general education should lead the student to improve and maintain his own health and accept his share of responsibility for protecting the health of others. (1)

Still other significant conferences gave emphasis to the role of health education, such as the White House Conference on Education in 1955. (9) In answer to the question, "What should our schools accomplish?", the Conference Report recommended that the schools should, among other things, help each pupil to develop physical and mental health and wise use of time, including constructive leisure pursuits.

One of the most recent and significant statements regarding the outcomes of education is listed in the *Report of the National Education Association's Project* on Instruction. It states, in part, "... the content of health instruction belongs in the school curriculum because such knowledge is necessary, is most efficiently learned in school, and no other public agency provides such instruction." (7)

As the preceding statements indicate, health education is and has been an objective of education for many years. It is a dicipline which focuses on and strives for maximum physical, mental and social efficiency for the individual, his family, and the community.

Health is broad and positive in its implications. A multiplicity of factors contributes to the achievement of a state of health. The health education curriculum needs to be built around the biological and social facts and principles which relate to man's existence, survival, and adjustment. Health education may be conceived as an applied science which rests on solid scientific and social foundations. One root of health education entered the curriculum as instruction in physiology and hygiene. The change in terminology resulted in part from an effort to change the emphasis from didactic instruction limited to the structure and function of the human body, to a broader approach which included the application of knowledge in human living. Facts and principles, drawn from scientific areas such as genetics, anatomy, physiology, bacteriology, microbiology, and psychology, as they can be applied to human living and human health, are essential. Likewise, those facts and principles arising from sociology, social psychology, anthropology, economics, and political science, known to be significant in understanding health needs and problems and which are important in motivating health behavior, become equally important in the process of health education. As such, it is a dicipline in which the relevant knowledge and ideas from several fields are combined and synthesized.

Phenix stated in his discussion of cross-disciplinary studies that they require more knowledge and skill, greater care, and better mastery of materials than do studies within a particular discipline, where the lines of productive thought may be kept more directly and continually in view. He cautioned against a temptation to shallow, undisciplined thinking because of the mixture of methods and concepts involved in studies cutting across several disciplines. The integrity of health education as a field of study depends upon the selection and unique interpretation of content material from several disciplines, sequentially organized into learning opportunities as a means of affecting health behavior. (8)

HEALTH EDUCATION — A DEFINITION

Have you ever been asked: What is Health Education? How does what you teach in Health Education relate to a child's everyday involvement with self, home, school and community? Are facts as important as attitudes in Health

Education? In other words, have you ever been asked to put into words just exactly what you believe Health Education really is, or is not, and how it contributes to the total educational program of each child? Perhaps if you have not been asked by someone else you have asked yourself questions similar to these. Then, on the other hand, you may have asked these questions, yet have not adequately searched for, or acquired relative and meaningful answers.

Whatever the case, such questions need to be probed until meaningful answers are set forth. While this entire guide is devoted to helping health educators, administrators, and other educational personnel involved with health programming approach a better understanding of school health education, its program, methods, and application, the American Medical Association and the National Education Association, through their Joint Committee on Health Problems in Education, (2) has succinctly outlined the essential elements in the definition of what health is, is not, and how it can relate meaningfully to your school.*

Health Education Is:

- education for health; education for healthful living of the individual, family, and community.
- an academic field and subject. All of its content and objectives are intellectual and academic in nature. Its content must have meaning and purpose to the students now as well as in the future.
- a relatively new discipline. The natural (biological), the behavioral, and the health sciences provide its foundation.
- Facts, principles, and concepts pertaining to healthful living constitute its body of knowledge.
- The body of knowledge identified, organized, synthesized, and utilized in appropriate courses and experiences is sequentially arranged to form the discipline.
- It is derived from sociology, psychology, educational psychology, and the behavioral sciences - its purpose is to favorably change health behavior (knowledge, attitudes, and practices).
- a needed approach to bridge the gap between scientific health discoveries and man's application of these discoveries in daily life.
- an integral part of the curriculum at every level and an essential element in the general education of all students.
- the educational component of a school, college, or university health program (instructions, services, and environment).
- contributing to the well-educated individual by providing meaningful health experiences which can change health behavior. (Educational Policies Commission, The Purpose of Education in an American Democracy, 1938)
- best achieved by developing the rational powers of man (critical thinking), enabling him to make wise decisions and solve personal, family, and community health problems. (Educational Policies Commission, 1961)
- based upon and improved through basic and applied research.
- best conducted by professionally prepared health educators from accredited colleges and universities.

Health Education Is Not:

- hygiene of yesteryears. It is not "blood and bone" hygiene, nor is it physiological hygiene.
- anatomy or physiology or both of these combined. These fields serve as its foundation, but do not contribute the major concepts of its body of knowledge. They are necessary as background to understand health concepts applied to living.
- a pure science, but an applied science. It is an applied science concerned with man's understanding of himself in relation to health matters in a changing society.
- physical education. Health education and physical education are separate and distinct fields. They have similar goals, are closely related, but their activities and the conduct of activities are completely different. Sound physical education programs properly conducted contribute to the health of the individual.
- physical fitness. It contributes to the total fitness of man. It is not synonymous with muscle fitness.
- driver education. Health education is related to driver education through its safety area. Driver education is but one facet of safety.
- a requirement course organized to deal with legal provisions of alcohol, narcotics, and fire prevention. These are essential problems that should be incorporated with other basic problems to provide a structured course or program.
- rainy day or incidental instruction. Health education must be carefully planned and incorporated in the curriculum; taught in a wholesome learning environment in which pupil activities can be carried out, particularly through problem-solving situations under the guidance of professionally prepared health educators.
- just grooming practices such as tooth brushing and combing the hair. Health education has gone far beyond grooming.

What does Health Education Mean For Your School?

Through adequate education for health, you can provide students with:

- needed information on crucial problems, such as self-medication, nutrition, obesity, sex education, alcoholism, VD, and mental health.
- an opportunity to discuss problems of interest to them; to assess values of others; and to identify with an adult directly interested in the problems of their age group.

- the opportunity to use real problems in studying the process of critical thinking.
- interest in health and safety aspects of their own daily activities.
- a sense of personal health responsibility.
- a feeling of responsibility for community health.
- a critical attitude toward advertising of health services and products.
- an understanding of their growth and development.
- an opportunity to develop the ability to understand and interpret health information.
- the knowledge and skill to recognize quackery and charlatanism.
- an appreciation for good health.
- pride in developing and maintaining good health.

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Section Two

Instructional Methods in Health Education

CONCEPTUAL LEARNING IN HEALTH EDUCATION

A Rationale: Educators are faced with keeping abreast of new developments in school technology and are constantly searching for better ways of helping children acquire more meaningful and vital concepts which will motivate them to become self-sufficient and responsible.

Educators must seek ways of helping children to cope with and make wise choices in a rapidly changing society. One must be concerned about the way children learn and change their thinking and actions as a result of their experience in health education. In other words, the ultimate objective of health education should be to assist the individual in thinking, valuing and reacting according to his ever-changing environment and those influences it imposes upon his life and society.

An increase in emphasis is being given to conceptual learning because concepts can greatly affect an individual's behavior. Verbalization and repetition of isolated facts does not necessarily produce understanding, or often affect human motives.

Concepts-A Definition: The formation of a concept is the development of an idea or understanding of something. It may be the concept of a concrete article like an automobile, in which case there is a rather clear image or it may be the concept of an abstraction such as love, self-respect or health itself. Each person forms his own concepts from his personal contact and experiences with actual objects and events in life through sensory organs and his feelings. From these accumulated perceptions, one constructs his concepts. Concepts affect behavior, while the process of memorizing isolated facts without conceptualization has little value in decision making.

Basic concepts should serve as guides for the teacher in selecting the learning experiences for the child. Concepts themselves should not be taught as such, but the teacher needs to plan the learning experiences that will provide the student with opportunities for developing and personalizing the concepts for himself.

Many studies have come to the conclusion that the development of a concept arises out of one's own perceptions of objects and situations and through participation in experiences of various kinds. A concept is a relatively complete and meaningful idea occurring in the mind of an individual. It is understanding of something developed by an individual and not simply a restatement of a well-memorized group of someone else's thoughts and ideas.

The ultimate measure of understanding of the concepts of health will not be the ability to pass the examination, but rather will be reflected by the obvious attitudes and behaviors of an individual as indicated by his health practices. Further, it will be difficult for health concepts to be developed to their fullest in the individual without parallel understandings on the part of his family and community.

Program implementation should be flexible enough to permit the teacher to challenge the students to think about health, starting from the point of the student's needs and concerns. Even negative attitudes on the part of young people can provide a very excellent starting point for exploration of health behaviors. It may be well to emphasize at this point that the ultimate goal of the health teacher should be to make health instruction meaningful and relevant to the learner; meaningful to his needs, mentally, physically, and socially; and relevant to the point of personal involvement. Through involvement concepts become personalized and their application realized. It is toward this point that we must help each child progress if health education is to fully discharge its responsibilities to the learner.

— How Students Develop Concepts in Health Education: An informed child knows the facts but may rarely use them; the educated child can translate understandings, attitudes and skills learned in the classroom and gymnasium into his daily living at school, home and in the community.

Health teaching is effective in achieving its objectives when it results in the changed behavior of children associated with the correction of defects, improvement of health habits, establishment of undesirable attitudes, correction of faulty concepts and the development of interests which will lead to an enjoyable and useful life now and in the future.

Following are some factors which may influence the student's ability to acquire positive concepts through health education.

— A Healthful School Environment: The school should be a laboratory where the individual has an opportunity to experiment with his own ideas and to develop personal values and understandings. Schools can contribute to the health of children and youth through making it possible for them to live healthfully while they are in school.

— A Comfortable Social-Emotional Climate and an Alert Interested Teacher: The teacher guides the learning of desirable social attitudes, i.e., cooperation and fair play, as well as activities and interests to help in growth and maturity development. The teacher needs to be aware of individual health needs of students. An important part of developing a healthful school environment is the social-emotional climate which the teacher establishes in the classroom. Here a climate is necessary that renders the student free to inquire, to question, to investigate and to discuss with teacher and fellow student alike. Any threat of embarrassment or reproof must be eliminated if the learner is to have the opportunity to develop individually according to his needs.

— An Understanding of Goals for Self-Direction: Students must learn to assume responsibility for care and maintenance of their own health. After leaving school, when self-direction is required, the student will need to know how to plan and carry out a program of healthful living. To help achieve this goal it is imperative that

students be given opportunities for the analysis, evaluation and application of health information through varying experiences. Seemingly, without such opportunities, it becomes increasingly difficult to expect they will do so once the security of the school environment is behind them, based solely on theoretical examination of information.

— **Guidance in Meeting Health Problems**: The health of children, physical, mental, and social depends upon what they do for themselves more than upon what is done for them. While the home and community remain the major influences in determining the health attitudes of children, it becomes the responsibility of the school to serve as a catalyst by effecting a meaningful merger of all these influences upon the life of the individual.

— **Meaningful Units Adapted to the Maturity Level of the Children**: Programs in health education must be continuous - not taught one year and ignored the next. The content of the program is determined by the needs and interests of the children and by the stage of growth and maturity which they have reached. Readiness is an important factor to learning.

— **Motivation for Learning**: Before learning can be meaningful a student's interest must be stimulated. The desire to learn is an essential prerequisite to critical thinking and the teacher is challenged to help each individual develop this desire according to his interests and needs. The opportunity to make decisions, to accept responsibility for their choices, and to aid in planning, developing and evaluating projects will serve to increase student interest and motivation.

— **Opportunity to Use Real Life Situations as a Basis for Interests in Health**: Health is more than a subject to be taught--it is a way of life--and as such presents daily opportunity for the development of attitudes, concepts and skills that will help students to become healthier, happier individuals. Teachers can have a dynamic impact upon students if they will use the daily interactions with them to best advantage. To serve as an exemplar to which the learner can look with pride can be one of the teacher's greatest assets. One's actions speak so loudly that what is said can scarcely be heard.

— **A Continuous Program of Evaluation**: For greatest effectiveness, evaluation of the entire program —organization, instruction, services and school environment—must be conducted on a regular basis. Evaluation measures should include administrators, teachers, students, parents, and the community. Only through such varied reactions can a realistic appraisal of the program be made.

As the above statements reveal, the learning and acquisition of health concepts may be affected by many factors within the school environment. There seems little doubt that if health is to become a dynamic force in our lives, and the lives of those we teach, it must be liberated from a two by four educational context, namely, the **two** covers of a textbook and the **four** walls of the classroom.

There is obviously no one and only method by which learners develop concepts of health. For every concept suggested in the Health Instructional Section of this Guide there are numerous activities offered through which the respective concepts may be achieved. No one activity is particularly better than another. The choice must be dependent upon many factors with the needs of the learner being the dominant criterion.

While Section III lists concepts in each of the seventeen content areas found in this Guide, it seems appropriate at this point to offer examples of basic concepts to further explicate their understanding. The following statements serve as illustrations of proposed concepts.

Examples of Concepts:

ACCIDENTS

Man interacts with people, things and events in his environment.

That which occurs but was unplanned is an accident; the result may be desirable or undesirable.

AGING

A reorientation and/or new discovery of areas in which maximum potential may be further realized.

A process of continued development (maturation) of the whole person rather than a preoccupation with the deterioration of any one of its parts.

ECONOMICS OF HEALTH:

The significance of financial planning is a function of the willingness for personal involvement and responsibility.

MENTAL HEALTH

Interaction of the intellectual, emotional and value dimensions of man affects growth and maturity and decision making.

PREPAREDNESS

Developing the strength of the individual insures the integrity of the community.

STIMULANTS AND DEPRESSANTS

Materials of this nature can produce sensations and experiences which, while initially satisfying, can lead to either physical change in the body, unalterable damage to body parts, distortion of emotions and reality, mental disorders and either physical, mental, emotional or social addiction.

Anything which denies the fullest development of self-confidence and an understanding of reality, through reality, is not conducive to optimum healthful living.

WATER:

A solvent.

Concepts, as illustrated above, are methods for organizing health content. While there are various ways by which health content may be grouped or organized, concept development has been the accepted approach used by at least two major curriculum studies in health education within the last decade. They are: (a) The Curriculum Commission Project, Health Education Division, American Association of Health, Physical Education and Recreation (1), and (b) The School Health Education Study (4).

It is well, at this point, to acknowledge the fact that many approaches to organizing health information are available. However, evidence would seem to indicate that conceptual development is a sound, manageable approach for developing and organizing health content.

While these Guidelines have been developed utilizing the conceptual approach, it would be well to caution ourselves not to become so involved with the terminology that we forget the purpose for which such conceptual organization has been used. Our concern over labels or terms such as CONCEPTS should be secondary to the growing need to classify, organize and emphasize health knowledge. To recognize this need and to seek appropriate and effective means for achieving such organization is far more important than the use of certain terms only because they are part of prevailing educational verbiage. This has been precisely the intent of this Guide, to assist the teacher and administrator in organizing the total school health program so that it may become a dynamic and meaningful force in the lives of all concerned.

INSTRUCTIONAL OBJECTIVES

An Introduction:

Moving from the identification and organization of health knowledge, it becomes equally important to recognize the need for developing objectives. Teachers have stated objectives in the past for courses, unit plans and daily lessons. They have often been described as the prerequisite for effective teaching. Yet, even when objectives are formulated they are frequently stated in terms which are non-operational or very difficult, if not impossible, to measure or evaluate. While educators have long recognized the need for stating objectives, they have all too often given little attention to their precise statement or application.

In 1956, Benjamin Bloom and his associates published a text which has since generated widespread recognition, the *Taxonomy of Educational Objectives*, in which he defines educational objectives in this way:

> By educational objectives, we mean explicit formulations of the ways in which students are expected to be changed by the educative process. That is, the ways in which they will change in their thinking, their feeling, and their actions. There are many possible changes that can take place in students as a result of learning experiences, but since the time and resources of the school are limited, only a few possibilities can be realized. It is important that the major objectives of the school or unit of instruction be clearly identified if time and effort are not to be wasted on less important things and if the work of the school is to be guided by some plan. ... objectives are not only the goals toward which the curriculum is shaped and toward which instruction is guided, but they are also the goals that provide the detailed specification for the construction and use of evaluative techniques. (2:26)

Since the publication of Bloom's Taxonomy, considerable emphasis has been given to the importance and impact which instructional objectives can and do have on the process of education. In 1962, Robert F. Mager published a small programmed text entitled, *Preparing Instructional Objectives*, in which he states:

> An objective is an intent communicated by a statement describing a proposed change in a learner - a statement of what the learner is to be like when he has successfully completed a learning experience. It is a description of a pattern of behavior (performance) we want the learner to be able to demonstrate ... When clearly defined goals are lacking, it is impossible to evaluate a course or program efficiently, and there is no sound basis for selecting appropriate materials, content, or instructional methods. (3:3)

When objectives are not clearly and succinctly defined prior to instruction it becomes increasingly difficult to evaluate exactly what has been accomplished. In addition, it also makes the selection of congruent instructional methods and materials extremely arduous because there is little basis for making such judgments.

On the other hand, when objectives are clearly stated the anticipated goal is often better understood by both learner and teacher. As a facilitator of learning it is imperative that the teacher make every effort to enhance the clarity of the instructional process. Development of clearly stated instructional objectives is a first step toward achieving this goal.

In stating the objectives for instruction, teachers frequently phrase such statements in terms of what they, the teachers, intend to do. While it is important to have a definite plan for instruction, and to establish exactly how you intend to pursue your instructional goal, it is additionally critical that your instructional objectives state the expected behavior of the learner and the conditions under which such behavior will be observed. In addition, a meaningfully developed instructional objective will provide direction for evaluation congruent with the stated objectives and operational conditions.

In Mager's book, *Preparing Instructional Objectives* an objective is described as having three basic segments. Mager asserts that an objective must successfully *communicate* its instructional intent for it to be meaningful. In order to do this an objective should attest to the following:

1 Identify the terminal behavior by name and specify the kind of behavior which will be accepted as evidence that the learner has achieved the objective.

2 Describe the important conditions under which the behavior will be expected to occur.

3 Specify the criteria of acceptable performance by describing how well the learner must perform to be considered acceptable. (3:12)

While these criteria are guidelines to making an objective more meaningful, the true test of an objective is simply, does it *communicate*. It is entirely possible that an objective will communicate the desired instructional intent without consisting of each of the above items. If it does, fine. *Communication* is the key which needs to be stressed in the development or structuring of objectives. An objective should be so worded that persons of similar competence could identify successful learners by referring to the terms of the objective and be in agreement.

In the name of communication perhaps it would be well if we were to direct our attention toward examples of what the preceding paragraphs have discussed.

Examples of Instructional Objectives:

It is suggested when writing objectives that certain words denote clarity and specificity more than others. For instance, compare the following lists of words denoting behavior for clarity of meaning.

A	B.
Understand	Identify
Know	Classify
Enjoy	Illustrate
Realize	Evaluate
Appreciate	Apply

Column A lists words which can be easily misunderstood and are equally difficult to evaluate. Interpretation of any word in column A may be quite varied and hold different meaning for teacher and learner. Yet in many instances teachers will cite objectives using these words and others similar to them. Examples of such objective structure are illustrated below:

To *create a thorough understanding* of principles underlying good dental hygiene.

To *gain an appreciation* of the need for the fluoridation of public water supplies.

To *realize the importance* of a balanced diet in relation to physical growth and development.

While these objectives state a behavior (italicized), the behavior stated is open to such broad interpretation as to make determination of its successful fulfillment practically impossible. Further, the above objectives do not state the conditions under which the learner will be expected to demonstrate the prescribed behavior, nor do they state the criteria for successful performance. In such cases the teacher's intent to communicate effectively and completely has not been fulfilled.

In column B the list includes words which are more explicit in meaning and leave less room for misinterpretation by the learner and the teacher. They are terms specifying a particular behavior which will be expected as a result of the intended instruction. Having thus stated objectives expressed in more specific behavioral terms, evaluation can be more easily and knowingly conducted. Not only will the teacher be able to evaluate more meaningfully and relevantly, he will be able to better guide the development of learners toward the expressed instructional goal through congruent selection of methods, materials and content.

Examples of objectives illustrating this structure are written below:

A. When a student completes the unit on Dental Hygiene he will be able to *identify* the groups of teeth and their specific functions and *diagram and name* the nomenclature of a tooth.

B. **Given a list of foods** the student will be able to *classify* each food into one of the four basic food groups and *write an analysis* of how the body uses each substance in its growth and maintenance.

C. **Given a list of 20 statements** concerning the fluoridation of public and private water supplies, the student will be able to *classify* at least 90% of them according to facts, fallacies or unsupported claims.

In the examples above the behaviors expected are in italic type, the condition under which the behavior is expected to occur is in bold type, and the criteria for acceptable performance is underlined.

The preceding examples of objectives serve to illustrate a progression in the application of Mager's criteria. In example A only a behavior is indicated, but that behavior is specific rather than vague and general. Example B includes the behavior expected as well as the conditions under which the behavior is to be performed. In example C the behavior, condition and the criteria for acceptable performance are indicated.

Instructional objectives, thus developed, provide the direction and content necessary for reaching the concepts selected. Concepts may serve to categorize or organize health knowledge, but clear, explicitly stated objectives are essential for communicating the intent of the proposed instruction.

Levels of Objectives.

Instructional objectives need to be developed at several levels of classification. The basic level of recall or comprehension requests only that the lecturer "give back" that information which he has previously been given and at a prescribed time. To increase the meaningfulness of the learning process it becomes necessary that we offer to the learner opportunities for the evaluation and application of information in accord with his individual needs and those of his environment. Such opportunities are more likely to become part of the teaching - learning process if the intent to provide them is clearly communicated through behaviorally stated objectives.

Differences in Objectives:

While objectives need to be developed at various levels of classification there may also be differences in objectives from environment to environment. It is reasonable to assume that objectives which might have been developed at each grade level and for each content area presented in this Guide would not be applicable for all school districts throughout the Commonwealth. Therefore, objectives, their meaning, structure and application have been described in the hope that each teacher or district may find the information useful in applying it locally according to their respective needs.

While specific objectives have been omitted it is hoped that the purpose of instructional objectives has been clearly demonstrated. They are a most vital link and share a definite relationship in helping each learner conceive the sought for concepts according to the meaning it has for him. It is assumed, therefore, that each teacher will develop those objectives which can be most meaningful in terms of the learner and his environment and which most clearly communicate the goal of the learning process. In summary; concepts may remain very similar for purposes of organizing health knowledge, while instructional objectives may vary considerably depending upon environmental conditions.

HOW TO USE THE HEALTH INSTRUCTIONAL UNITS

The health instruction units which follow are designed to offer students and teachers varied opportunities for learning and the development of attitudes and values concerning personal and public health. The formulation of personal attitudes and values may be found to be more important than the acquisition of facts in particular units. It is hoped that the student will come to understand how his attitudes and values can influence, to a large extent, how he interprets and evaluates health information and perhaps even more relevant what application is made of such information in personal behavior change.

The grade designations are intended to be flexible. For instance, information appearing for fourth through sixth grades need not be used at this grade level if it seems inappropriate. Depending upon circumstances, it may prove advisable to utilize materials from a previous or advanced level according to the readiness of the students. In addition, the unit concepts and activities are only suggestions and may be selected, modified, or deleted in terms of student and community health needs, problems and experiences. Some unit activities are designed to be presented by the teacher, others are structures to more actively involve the student. Hopefully, many methods of instruction will be employed by the teacher, not only for relief of repetition, but to better facilitate learning. Students need opportunities for more than recall and comprehension of factual information. It is important that the curriculum offer to each student an environment for learning that encourages application, analysis, synthesis, and evaluation of health knowledge, principles and values.

A word of mild caution is perhaps in order at this point - THIS IS INTENDED ONLY AS A GUIDE. It has been prepared as a model for a sequentially developed, comprehensive school health program. It has gone beyond the usual instructional program to include school health services and school environment because it is believed that all three areas must be emphasized and coordinated in order to achieve a truly comprehensive school health education program. However, it is also intended for use by all school districts, regardless of size, location or socio-economic circumstances. It is for this reason that an emphasis is placed on the necessity for the teacher to use the Guide with flexibility and discretion. The flexibility referred to would apply equally to the selection of content materials, the use of selected concepts and activities, and the grade placement of content areas.

It is recommended that a curriculum committee be selected to determine what content areas should be taught at the grade levels that health is presented. The committee, in doing so, should give consideration to the health needs of the community so that emphasis in certain areas may have immediate and relevant application to student need. While it is important to stress community and home cooperation, it is essential to bear in mind the coordination which is necessary between disciplines within the school.

Health is an interdisciplinary subject and as such is subject to duplication of content by several subject areas, i.e. biology, home economics, social studies, driver education, etc. It is, therefore, vitally important that a vertical coordination, grade to grade, as well as a horizontal coordination, cross-discipline, be developed. Such intra-school coordination will do much to help eliminate needless repetition of content and serve to strengthen certain areas which can be more adequately presented by one discipline or another. It may further provide for a broader and more frequent coverage of topics in health education and in total curriculum development.

While uncoordinated repetition is not advisable, it is not to say that repetition is to be completely avoided. When repetition occurs it is on the premise that students do not always learn at first exposure and, too, that repetition of content areas should always be presented in greater depth, building on previous learnings.

The format includes grade 13 for several reasons, again, keeping in mind the desire for flexibility of use. It is intended to serve as: (1) a guide for undergraduate institutions, (2) supplementary material for use with high school classes, or (3) as general resource material to be used discriminately by the teacher with due consideration for the readiness level of the learner.

Specific references to films, filmstrips, slides, etc. for each Unit have not been listed. Such teaching aids are constantly being revised, up-dated and developed anew. Therefore, it was deemed inadvisable to list materials of

this nature. Instead, a comprehensive listing of sources for audio-visual and written materials has been compiled and is located in the Appendices.

It is intended for the teacher to use this list to obtain catalogue listing of materials and determine that material which is most appropriate to his needs and those of his students. Once the materials desired are determined it is suggested that requests for their use be made first to local agencies. Such agencies include county or regional film libraries, school and college libraries and the film libraries of the Pennsylvania Departments of Health, Welfare, and Education.

SUGGESTED SCOPE AND SEQUENCE CHART

The following Scope and Sequence Chart has been developed to assist the teacher in establishing the starting point and suggested periods of greatest concentration in specific areas of instruction. Districts may find it best to alter this suggested alignment to better meet local needs. The horizontal arrows indicate this to be an acceptable and even recommended practice.

	K–3		4–6		7–9		10–12		13
ALCOHOL		↔	I–B	↔	H	↔	H	↔	C
ANATOMY	I	↔	I–B	↔	H	↔	R	↔	
COMMUNITY HEALTH	I–B	↔	B	↔	H	↔	C	↔	R
CONSUMER HEALTH	I	↔	I–B	↔	H	↔	H	↔	C
DENTAL HEALTH	I–B	↔	H	↔	C	↔	R	↔	
DISEASE CONTROL	I	↔	B	↔	H	↔	H	↔	C
DRUGS AND NARCOTICS	I	↔	B	↔	H	↔	H	↔	C
FAMILY RELATIONSHIPS	I	↔	B	↔	H	↔	H	↔	C
HEALTH CAREERS	I	↔	I	↔	B	↔	H	↔	C
HEREDITY AND ENVIRONMENT	I	↔	B	↔	H	↔	C	↔	R
HUMAN SEXUALITY	I	↔	B	↔	H	↔	H	↔	C
MENTAL HEALTH	I	↔	B	↔	H	↔	H	↔	C
NUTRITION	I–B	↔	H	↔	H	↔	C	↔	R
PHYSICAL FITNESS	I	↔	B	↔	H	↔	H	↔	C
PHYSIOLOGY	I	↔	B	↔	H	↔	C	↔	R
SAFETY	I–B	↔	H	↔	H	↔	C	↔	
SMOKING		↔	I–B	↔	H	↔	C	↔	C

I–Introduction B–Basic Content Development H–Heaviest Concentration C–Continuing Emphasis R–Reinforcement of Content

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Section Three

Health Instruction Areas

ALCOHOL

Rationale for Unit:

The magnitude of the problem related directly or indirectly to beverage alcohol in the United States can only be estimated.

Surveys indicate that there is between seventy and one hundred million drinkers in this country today. This is approximately half the population. The majority of these are occasional or moderate drinkers.

Whether one approves or not, social drinking continues as a custom because people like to drink. All social customs and practices are complex, and all are accompanied by difficult and complicated problems of misuse.

Alcoholism is one of this country's major medical, social and economic problems. It is a tragic problem indeed when one considers that this condition is brought on knowingly. Every victim of alcoholism has made the choice to drink. Alcoholism is a progressive illness, epidemic in nature, and affects men and women in rural as well as urban areas without regard for educational, religious, cultural, or financial status. The acute social and domestic problems of alcoholism are reflected in broken homes, family misery, neglected children, automobile accidents, criminal problems, unemployment and poverty. Broad inter-professional public action at every level of society will be required for its solution.

Education is only one means through which man tackles his personal and social problems. Teaching youth about alcohol may not completely eliminate its misuse for the crux of man's problems with alcohol is within himself and not with the use of alcoholic beverages. However, accurate, unbiased, and well-presented classroom instruction about alcohol may be expected to influence today's parents indirectly and tomorrow's parents directly. Young people will have a broader and sounder foundation on which to base personal decisions about drinking practices and social responsibilities.

Basic Concept:

The increase in consumption of beverage alcohol by all age groups and the apparent acceptance of moderate drinking by society indicate that there is a need for adequate information concerning alcohol so that mature personal judgments can be made concerning its use.

Suggested Pupil Outcomes:

1. Given impartial, scientific facts concerning the nature, use, and effects of alcohol, students shall be able to analyze and evaluate their attitudes and feelings in order to make intelligent decisions concerning the use of alcoholic beverages.
2. Demonstrate a knowledge of the laws and regulations concerning the use, sale and possession of alcohol in Pennsylvania.
3. Identify, compare and contrast personal and interpersonal family and community related problems associated with the use of alcoholic beverages.
4. Discuss and evaluate the decision to use or not to use alcohol as not only a personal decision, but also one which will affect others.

ALCOHOL

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Beverage alcohol is usually obtained from fermentation of fruits and grains.	1. Discuss the source of the various alcoholic beverages. 2. Discuss the value of ethyl alcohol as a food. 3. Discuss methods for producing alcoholic beverages: a) brewing b) distillation c) fermentation
The effects of alcohol on the body are related to body weight. The immediate effects of drinking are more pronounced in the immature bodies of young people.	1. Discuss the effects of alcohol on personality (doing foolish things, acting silly, failing to follow moral standards). 2. Discuss the depressant effects of alcohol on muscular control, thinking, and ability to make decisions. 3. Have local policeman discuss the problems caused by drinking drivers. 4. Oral and written reports: The effect of alcohol in sports, driving an automobile, flying, and in occupational skills. 5. Scrapbook: Have pupils make a scrapbook to include pictures and articles concerning the problems created by the use of alcohol. 6. Bulletin Board: Illustrate and display pictures of accidents and other losses attributed to alcohol.
Social drinking is acceptable in many societies.	1. Investigate the use of alcohol on special occasions by different nationalities (at meals, celebrations, holidays). 2. Survey: Conduct a survey among pupils to find the kinds of alcoholic beverages that have been tasted (where and when).
Alcohol is used in many different ways in our society.	1. Discuss the medical and industrial uses of alcohol. 2. Distinguish between ethyl and methyl alcohol. 3. Create posters: Uses of alcohol (preservative, disinfectant, drug).
People drink for many reasons.	1. *Guest Speaker on topic*: Why some people do not or should not drink. 2. List the reasons teenagers and adults give for drinking. Evaluate them. 3. Collect advertisements from magazines on alcoholic beverages and analyze them in class. 4. Discussion: Why would the following be interested in whether an individual would drink or not: family, church, government, liquor industry, welfare agencies, employers.
Immoderate use of alcohol may cause many personal and community problems.	1. Reports: People who drink to excess are those who are unable to face their problems and are using alcohol as a means of escape. 2. *Guest Speaker* (Welfare Society): Discuss problems related to alcohol: a) financial b) work efficiency c) child neglect d) respect for family members

ALCOHOL

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Investigate reports of the National Safety Council relating alcohol as a casual factor in motor vehicle accidents. 4. Discussion: Why do individuals who know how alcohol affects sensory perception still drive after they drink?
Alcoholism is now recognized as an illness which can be treated.	1. Reports: What is Alcoholism?, What are the causes and signs?, What are the methods in treating alcoholics? 2. *Guest Speaker*: The role of Alcoholics Anonymous in helping alcoholics. 3. Class discussion: What should be our attitude toward alcoholism? Consider: a) alcoholics are sick b) alcoholics can be helped c) alcoholics need greater public assistance and support

ALCOHOL

7 - 9

The blood stream carries alcohol directly to all parts of the body where it is received without change.	1. Explain how the body uses alcohol: consider absorption and oxidation in the cells and liver. 2. Bulletin Board: Illustrate the various beverages and their sources. 3. Compare the nutritional elements found in a glass of milk, an ounce of whiskey and a bottle of beer. 4. Explain the uses of methyl alcohol in industry. 5. Display a beer, wine, and a whiskey glass and discuss the amount of alcohol contained in each glass.
Alcohol affects the body in many ways.	1. Construct a chart showing the progressive effect produced by blood alcohol concentration. 2. Consider and discuss the following progressive effects of alcohol: a) loss of intelligent behavior (self-control, judgement, decision making) b) decrease in muscular control (reaction time, coordination) c) influence on the sense organs (vision, hearing, equilibrium) d) unconsciousness (decrease rate of breathing, heart action, body temperature) 3. Poster: Illustrate the medical uses of alcohol. 4. Report: Alcohol affects the body in direct relationship to the concentration of alcohol in the blood. Consider the following influencing factors: amount ingested, rate of drinking, volume of blood. 5. Explain the use of depressants and stimulants. Give examples of each.
Social drinking is acceptable in many societies.	1. Conduct research on the following: Why do some people drink and others abstain from drinking? Consider the physical, psychological, legal, economic and religious reasons.

ALCOHOL

7-9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Interview: Have a pupil committee interview a physician or local health officer concerning the beneficial and adverse effects of alcoholic beverages. 3. Class Discussion: Should I drink alcoholic beverages? 4. Collect advertisements from newspapers and magazines and determine their effect on youth. 5. Discuss impact of TV commercials.
The uses of alcoholic beverages may result in personal, community, health and safety problems.	1. Discuss: What are the effects of problem drinking on family members? 2. Interview a member of the police department to find the effect of alcohol on the crime rate in the community. 3. Consult reports by the F.B.I. indicating the number of crimes in the United States associated with alcohol. 4. Discuss newspaper accounts of accidents and crimes involving the use of alcohol. 5. Compare the amount of money spent for alcoholic beverages, education, cancer, heart disease, and other health problems. 6. Determine the economic, social and physical costs of intoxication and alcoholism to the community, state, and nation.
Alcoholism is recognized as a disease which can be successfully treated.	1. Identify the attitudes of society towards alcoholics. 2. List the State agencies and private organizations which concern themselves with alcoholism. 3. Report: How does Alcoholics Anonymous help in the rehabilitation of alcoholics? 4. Discuss: Alcoholism concerns itself with the effect of alcohol on the person and the conditions within the person which led to the excessive use of alcohol. 5. Research and report on Ala-Teen and Ala-Non Programs.

ALCOHOL

10-12

Alcohol may be used in many ways to benefit as well as adversely affect mankind.	1. Show appropriate film illustrating the uses of alcohol. 2. Review the uses of alcohol in industry and medicine. 3. Discuss alcohol in terms of its being a food and its nutritional value. 4. List and discuss the individual cost (medical, occupational, rehabilitation) related to immoderate drinking. 5. Identify and discuss drinking customs in the United States and in other lands.

ALCOHOL

10-12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Alcohol affects the human body in many ways.	1. Have students do research on the physical properties of alcohol, and how beverage alcohol is made. 2. Construct a blood alcohol chart showing the estimated per cent of alcohol in the blood by the number of drinks consumed in relation to the body weight. 3 Invite a physician to class to discuss the depressant effects of alcohol on the body and its systems. 4. Student Reports: Differentiate between social drinking, drunkenness and alcoholism. 5. Have an athletic coach present his philosophy concerning drinking and athletic performance. 6. Discussion: What are the effects of "just a drink or two" on the behavior of an immature person at a prom or at a football victory party? 7. Investigate the factors which may modify the possible effects of "just a drink or two", i.e., mood, food eaten, body weight, kind and strength of drink, speed of drinking and attitude.
The reasons for drinking or abstaining from drinking vary with each individual.	1. List and discuss the reasons teenagers give for drinking. Are they compelling reasons? 2. Have students answer the following: How will drinking help me to become popular, healthy, successful, a good marriage partner and a successful parent? 3. Consider the influence of advertising media, such as, television and magazines on the drinking habits of teenagers and adults. Identify the selling points. Are they logical or influential? 4. Panel discussion: At what age should one be permitted to drink? Consider legal, social, and psychological aspects.
The sale and use of alcoholic beverages is controlled by law.	1. Arrange for local health officer or law enforcement officer to discuss the Pennsylvania State Liquor Code. 2. Class discussion: Does current legislation properly reflect what society desires? Does the present State Liquor Code satisfactorily control the sale of alcoholic beverages? Should teenagers be permitted to drink in the home?
Immoderate use of alcoholic beverages is allied to automobile accidents, crime, social, occupational and family problems.	1. Discussion: Problem drinking and successful family membership appear to be incompatible. 2. List and discuss problems suffered by a family if one member drinks immoderately. 3. Student Essay: A drinking driver is an injudicious drinker. 4. Class Debate: a) *Resolved*: Drinking in moderation is acceptable. b) *Resolved*: Drinking to any degree is harmful and should be prohibited by law. 5. Class reports: a) Problem drinking and its relationship to crime. b) Investigate the statistics provided by the National Safety Council and insurance companies to determine what propor-

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	tion of traffic fatalities and offenses are directly related to the use of alcohol. 6. Present appropriate film and conduct follow-up discussion concerning drinking and driving. 7. Interview a lawyer or judge to ascertain the procedures used to prosecute a person suspected of driving under the influence of alcohol.
Medical science has classified alcoholism as a disease, for which there is no specific cure.	1. Discuss how alcoholism differs from other diseases. 2. Explore the various causes of alcoholism and its progression. 3. List and discuss the signs of chronic alcoholism.
The community is involved in the rehabilitation of alcoholics.	1. Familiarize the students with local, state, and federal agencies giving aid to alcoholics. 2. Invite a member of Alcoholics Anonymous to speak to classes concerning the function of this organization in helping alcoholics. 3. Investigate a treatment center or clinic and their role in dealing with the alcoholic problem in the United States. 4. Discussion: The communities overall approach to alcoholism and its control must involve the following: a) informed public b) an enlightened law enforcement system c) courts and laws recognizing that alcoholics need help, not punishment d) available hospital beds e) social and health agencies offering help to families f) willing physicians to treat alcoholics g) clergymen aware of spiritual problems faced by alcoholics h) schools objective approach to the teaching of the use of alcohol. 5. Analyze the effectiveness of ALATEEN and ALANON programs.
Alcohol affects our economy in many ways.	1. Consider the following factors in discussing the effects of alcohol on our economy: a) agriculture and allied industries. b) employment provided in the manufacture and distribution of beverages c) consumer costs d) taxes received from the sale of alcoholic beverages e) cost of alcohol related to accidents f) cost to welfare related to broken homes attributed to drinking parents g) the illegal manufacturing industry
Many questions are asked by high school students concerning the use of alcohol.	1. Have students compile a list of questions concerning the use of alcohol. Use these questions to organize and develop an approach to the understanding of this social problem. *Examples of Questions Frequently Asked by High School Students Relating to the Uses of Alcohol:* a. What is alcohol and how is it made? b. Is it true that people die from over-drinking?

ALCOHOL

10-12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	c. Can the drinking habit be inherited? d. Is it possible to cure the drinking habit? e. When should alcohol be used as a medicine? f. Does the use of alcohol have any effect on life expectancy? g. What is the Pennsylvania State Liquor Code? h. Approximately, what percent of highway accidents involve drinking drivers? i. What substitute can be taken for liquor? j. Is drunkenness prevalent in wine-drinking France and in beer-drinking Germany? k. In just what ways may alcohol cause a craving which can only be satisfied by taking more alcohol? l. What should you say to somebody, if you are invited to drink? m. Does alcohol aid digestion? n. If you drink about once a month would it harm you? o. Why does the state sell liquor to people and then punish them for getting drunk? p. Why do doctors sometimes advise drinking? q. Are alcoholics born, or are they made by environment? r. Does drinking alcoholic beverages cause disease? s. What is the relationship between drinking and poverty? Crime? Divorce? t. Should drivers' licenses be issued to habitual drinkers? u. Why do people think wine is not as bad as beer or whiskey?

ALCOHOL

GRADE 13

Many factors and forces influence the use of alcoholic beverages.	1. Discuss and examine the problems of drinking and abstinence of drinking from the following points of view: a) desire for group acceptance and approval b) family patterns c) social customs d) desire for relaxation and pleasure e) boredom f) appeals of advertising on television and in magazines
Moderate or occasional use of alcoholic beverages has little, if any, residual effect on the health of the user. The immediate after-effects of alcoholic indulgence must be considered as a bodily risk.	1. Examine statistical records concerning the longevity of moderate drinkers and those who abstain. 2. List and discuss the bodily risks associated with drinking.
Continued excessive use of alcohol brings physical and mental deterioration.	1. Investigate and report on the following effects of excessive drinking: a) resistance to disease b) nutritional deficiencies c) impairment of the nervous and digestive systems d) alcohol psychosis e) longevity

ALCOHOL

Grade 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Alcohol diminishes the activity of body functions.	1. Compare the effects of alcohol on the body in the following progressive stages: a) loss of intelligent behavior b) decrease in muscular control c) influence on sense organs d) unconsciousness
Behavior of the average drinker can be correlated with the percentage of alcohol in the blood stream.	1. Have students construct a chart showing the effects of varying amounts of alcohol in the blood. 2. Pennsylvania has set a blood alcohol content of 0.10 percent or more as the level for identifying a person as being under the influence of intoxicating liquor. (Refer to The Vehicle Code, Section 624.1) a) Is 0.10 percent a safe and effective standard? b) List and discuss the advantages and application of the various tests used in determining blood alcohol content. 3. List and discuss the factors which determine the amount of alcohol that accumulates in the blood. (Rate of oxidation, rate of drinking, presence of food in the stomach, size of the person, and concentration of alcohol in beverages.)
The decision to drink or not to drink is a personal one.	1. Discuss the moral issues involved. 2. Explore the psychological, physiological, hygenic, and sociological aspects in deciding whether to drink or not to drink.
Alcoholism may be recognized in progressive stages.	1. Identify and discuss the warning signals of chronic alcoholism.
The heavy drinker and the chronic alcoholic create many of the social problems associated with the use of alcohol.	1. Discuss how the interpersonal relationships of the home and family may be affected by a problem drinker. 2. Open discussion by students indicating possible ways of resolving difficulties caused by problem drinkers. 3. Investigate the cost of alcoholism in terms of care, treatment, care of dependents, lost wages, accidents, crime, and rehabilitation.
The basic treatment of alcoholism begins with the recognization of a problem.	1. Have the students prepare individual research on the various methods and techniques used in treating alcoholics: a) psychotherapy b) hypnotism c) tranquilizing drugs d) Halfway Houses e) social rehabilitation f) Alcoholics Anonymous
Prevention of alcoholism is a worldwide problem.	1. Trace historical references made to the use of alcohol as weapons of war (Greeks, American Indians, etc.) 2. Review the national prohibition laws and their repeal. 3. Suggest ways of keeping alcoholics out of jails and keeping them in hospitals. 4. Examine the role of the medical profession, the general public, formal education, and the individual in meeting the problem of alcoholism.

ALCOHOL

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Medical Association, *Today's Health Guide*. (Chicago: American Medical Association, 1965).
2. Jellinek, E.M., *The Disease Concept of Alcoholism*. (New Haven, Connecticut: Publication Division, Yale Center of Alcohol Studies, 1960).
3. Licensed Beverage Industries, Inc., 115 East 44th Street, New York, New York 10017.
4. McCarthy, Raymond G., *Alcohol Education for Classroom and Community*. (New York: McGraw-Hill Book Company, Inc., 1964).
5. Mayshark, Cyrus and Leslie W. Irwin, *Health Education In Secondary Schools*. (Saint Louis: C.V. Mosby Company, 1968).
6. Pittman, David and Charles R. Snyder, *Society, Culture and Drinking Patterns*. (New York: John Wiler & Sons, Inc., 1962).
7. Rutgers University Center of Alcoholic Studies, Smithers Hall, Box 554, New Brunswick, New Jersey 08903.
8. Todd, Frances, *Teaching About Alcohol*. (New York: McGraw-Hill Book Company, 1964).
9. Yale Center for Alcohol Studies, 52 Hillhouse Avenue, Yale Station, New Haven, Connecticut, 06500.

ANATOMY

Rationale for Unit:

The study of anatomy may surrender much of its inherent fascination and excitement through the mediocre handling in the classroom—in treatment that is both lifeless and trite. Students with a healthy curiosity for the wonders of the body often have their appetites dulled by sterile presentations of factual information.

The curriculum guide is expressly designed to present material as effectively and as interestingly as possible, yet it still leans heavily upon the creativity of the individual teacher to breathe life into its educational soul. Motivation is the life-blood of learning; the desire to learn is the first dynamic of intellectual achievement.

The student can be reached far more successfully through the story of a lost limb replaced by surgery than by the memorization of 206 bones in his body. Labeling the varied layers of skin is less a masterly technique than to relate suntans and the work of suntan lotion to the skin, or, perhaps, the surgical procedure of skin transplantation.

Students are concerned with the practical aspects of their own health—skin problems, grooming, relaxation, weight control, and the examination of such elements properly belongs to this area of study. The teacher may also extend his presentations beyond the context of this unit to correlate directly with related units such as: Physiology, Nutrition, Mental Health, and Physical Fitness.

Basic Concept:

The study of anatomy begins with the effective presentation of basic body structure, yet extends beyond this fact to the natural body functions, and is directly involved with developmental patterns of all living tissue.

Suggested Pupil Outcomes:

1. Recall and state basic anatomical structure.
2. Compare and contrast the interrelationships of all body systems.
3. Identify and interpret the potentials and limitations of the human body.
4. Identify and interpret the individual differences among people.

ANATOMY

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The body is arranged in units or building block called cells.	1. Observe, if possible, the incubation period of hatching duck or chicken eggs. 2. Hatch and study the development of tadpoles. 3. Introduce pictures of various body cell structure, i.e. skin, muscle and bone. Examine the differences in shapes of cells. 4. Make a chart of all the life functions performed by the cell.
Muscles permit body movement.	1. Place hands on muscles of arms and legs to feel muscular movement as the body responds to activity. 2. Study the movement of an earthworm which is all muscle. 3. Show and discuss pictures of muscle structure and the functions of each. 4. Demonstrate and practice ballet positions and varied sports to study the muscles in action. 5. Discuss the importance of muscle development through physical activities such as running, climbing, jumping, catching and throwing.
Bones provide body structure.	1. Examine a skeleton. 2. Discuss types of joints, i.e., ball and socket, hinge, immovable, pivot, etc. 3. Demonstrate growth and functions of the skeletal system. 4. Illustrate with the use of a rag doll how the skeletal system provides support for the body.
Groups of cells working together become tissues or organs.	1. Examine models of organs, i.e. heart, stomach, liver, intestine, lungs, etc.
The body has special cells called the senses.	1. Compile a booklet of pictures or drawings illustrating our senses; taste, touch, sight, smell and hearing. 2. Ask the school nurse to talk briefly on ear and eye care. 3. Examine plastic models of eye, ear, mouth and nose. 4. Demonstrate the sensitivity of man's skin. 5. Play "Guess What" by feeling and smelling specific differences in texture and odor of objects with closed eyes.
Exercise is fun.	1. Have students develop original drawings of children exercising or playing. Discuss and compare. 2. Break the classroom routine with a period of vigorous exercise. Discuss muscles used. 3. Prepare charts of student's progress in physical fitness and exercises.
Good posture is an asset to personal grooming.	1. Demonstrate and practice good walking, sitting and standing posture. 2. Encourage neatness and cleanliness by equitable use of compliments directed to the children on the way they are dressed, have their hair combed, shoes shined, hair cut, hair style, etc. Avoid placing any child in an embarrassing situation.

ANATOMY

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Give time for children to observe posture and straighten up their clothing, tuck in their shirts, wipe off shoes, comb hair, wash hands, etc.

ANATOMY

4 - 6

The cell is the building block of all living things.	1. Study "the cell" under a microscope or microviewer. 2. Draw, label and explain cell structure.
Cells differ in order to perform their specific work.	1. Examine different types of cells and discuss the functions of each.
Cells combine into tissues and tissues become organs.	1. Examine models of the organs of the torso. 2. Examine and dissect specimens of animal organs. 3. Involve students in dissection of a frog or earthworm. 4. Play "Who Am I?"; teacher or student discuss the function of an organ and have the class identify it. Reverse the process.
The skeletal system is a multi-purpose system.	1. Collect and examine animal bones. Show cross-section of bone tissue. 2. Examine a chart or model skeleton. Study and discuss how bones fit together; compare hinge with ball-and-socket joints. 3. Discuss the protective function of the rib cage, skull and pelvis.
Muscles help man to perform a variety of body activity.	1. Discuss the voluntary and involuntary muscles and demonstrate examples of the performance of each.
Muscles generally act in pairs; one muscle of a pair contracts while the other lengthens or relaxes.	1. Discuss the terms: flexor, extensor, antagonistic, contraction.
Muscle tissue differs.	1. Through a labeled drawing, illustrate the appearance of smooth, cardiac and striated muscle tissues. Give examples.
The skin functions in a variety of ways.	1. Show and discuss slides of skin cells. 2. Develop a display showing parts of skin. 3. Discuss the protective coverings of humans, animals, birds, insects, and reptiles. Have students make a picture collection of these examples. 4. Discuss skin-tans, freckles, moles, warts, etc. Examine values and possible hazards of a sun-tan. 5. Study the sun-tan lotions available; report on the quality of available lotions.
The human body requires daily care.	1. Establish standards for good grooming. 2. Examine values of personal cleanliness; bath, shower, washing hair, nail care, washing before meals and after lavatory use, etc.
Personal cleanliness is an individual responsibility.	1. Display humorous illustrations of good grooming rules.

ANATOMY

4-6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Be complimentary to the child who maintains good grooming standards; give counseling and understanding to those with grooming problems. 3. Set up an attractive bulletin board illustrating well-groomed children.
Physical activity develops strength, flexibility and general good health.	1. Explain and discuss the physical fitness test administered within the school. 2. Examine recess activities in your school. Does everyone participate? What are the objectives of recess? Develop objectives. 3. Display pamphlets and other publications on personal fitness, growth, development and maturation. 4. Evaluate the physical education program of your school. 5. Stress the importance of daily physical activity. Provide time each day for *every* child's participation in some form of vigorous activity.
The senses help us to communicate with the world around us.	1. Develop a bulletin board and display showing the role of each of the senses, using pictures, diagrams and original drawings. 2. Diagram the structure of the ear. 3. Describe and examine the functions of the basic parts of the outer, middle and inner ear. 4. Consult with the school nurse on ear care and the demonstration of audiometer. 5. Construct a plastic or paper mache model of an ear. Examine prepared or commercial models of the ear. 6. Label a diagram of the tongue locating the areas of taste. 7. Demonstrate how certain foods disguise other tastes. 8. List the various ways the sense of smell makes life more pleasant. 9. Compile a list of "My 10 Favorite Fragrances." Examples: Christmas trees, cookies baking, fresh sheets, autumn air. 10. Diagram the parts of the eye. 11. Describe the function of sight using a model or drawing. 12. Develop special reports on: a) symptoms of eye difficulty b) importance of eye examination c) general eye care. d) contact lenses 13. Compare function of a camera to the function of the eye. 14. Arrange for an eye doctor to visit the class.

ANATOMY

7-9

Each cell, regardless of function, has basic structural similarities.	1. Prepare slides of living and dead cells of human skin, blood and onion skin. Examine under microscope. Diagram and discuss what is observed.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Identify the specific types of tissue within the human body. Show and compare similarities
Cells of similar structure, when combined to form tissues, are capable of more complex tasks than are single tissues.	1. Dissect a frog or other animal to isolate organs and tissues. 2. Dissect a heart of an animal. Identify the several tissues of this organ.
The skeletal system functions in many ways.	1. Bones serve the body as: a) supporting framework b) muscle attachments c) protection of vital organs d) storehouse for minerals e) production centers for blood cells
Growth patterns in teen-agers affect physical and emotional development.	1. Discuss height-weight-age relationship charts. 2. Examine *normal* physical development in both sexes. 3. Invite a counselor or other resource person to discuss changes in emotional outlook at puberty and during adolescence. (Refer to Units on Mental Health and Heredity and Environment.) 4. Conduct a panel discussion following class research exploring extreme growth patterns.
Normal function of the body is sometimes interrupted by disease, accidents and malformation.	1. Visit a physical or occupational therapy clinic. 2. Invite a therapist to discuss his work in rehabilitation. 3. Report on people such as Helen Keller who overcame tremendous obstacles. 4. Discuss how handicaps may become assets.
Posture is a reflection of mental and emotional health.	1. Discuss and demonstrate how the lack of self-confidence is often visible in one's posture.
The senses require continuous care.	1. Suggested topics for discussion: a) corneal transplants b) need for periodic eye examinations c) contact lenses d) hearing aids e) safety devices for protecting the sense organs found in industry and sports. 2. Investigate the Braille system. Obtain a specialist to speak to the class. Display materials written in Braille. 3. Research reported effects of TV and radiation on the eyes.
Personal cleanliness and good grooming is a result of individual pride.	1. Invite a beauty consultant to discuss fashions, application of cosmetics, etc. (Consult Unit on Consumer Health and coordinate with home economics department.) 2. Discuss reasonable dress regulations and other norms of sensible grooming. 3. Panel discussion on topic: Self Respect.

ANATOMY

10 - 12

The study of anatomy during the senior high school years needs perhaps a quick review, but the basic information should have been covered in the earlier years. It is recommended that the materials suggested at the previous levels be reviewed in light of the learner's apparent knowledge. The depth of the activities previously suggested may also be expanded to accommodate the preparedness of the student.

In addition, the following topics are presented to serve as discussion stimulants as well as a means for applying anatomical information to the promotion and maintenance of one's total health.

Man's growth pattern through gestation, infancy, childhood into adult life is influenced by hereditary and environmental factors.	1. Develop panel discussions focused on man's physical problems in relation to his occupation, recreation and diet. 2. Examine changes in contempory cultural patterns and their affect on man. 3. Research the aging process. 4. Examine medical research concerned with geriatrics.
Activity is important to maintaining good health.	1. Discuss cardio-vascular fitness. 2. Refer to unit on Physical Fitness. 3. Develop individual plans for maintaining personal fitness. 4. Examine recreational and leisure pursuits, individually oriented.

ANATOMY

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. Best, Charles H., *Human Body*. (Boston: Houghton-Mifflin Company, 1964).
2. Frohse, F., M. Brodel, L. Schlossberg, *Atlas of Human Anatomy*. (New York: Clay-Adams Publishers, 1961).
3. Grollman, S., *The Human Body*. (New York: The Macmillan Company, 1964).
4. Hanlon, John J. and Elizabeth McHose, *Design for Health: The Teacher, The School and the Community*. (Philadelphia: Lea and Febiger, 1965).

COMMUNITY HEALTH

Rationale for Unit:

While the technological advances of the 20th Century have created a better life for all of us, they have radically altered man's environment by creating new problems at a rate sometimes more rapid than control measures can be devised to deal with them. Increasing population, air pollution, deficiencies in liquid and solid waste disposal, the development of synthetic organic chemicals and the increasing use of radioactive substances are only a few of the developments that have imposed new problems on society.

Since environment may be evaluated in terms of the physiological and psychological responses of man to physical, chemical, and biological attributes of his environment, this unit will consider environment in terms of mental, social, and physical factors as they affect the individual.

The student should be helped to realize that, as an integral part of his community, he can and does affect health conditions. This unit will be more meaningful to the student if he actually explores the community's organization, problems and viewpoint.

This unit may be used in correlation with all other units in this guide.

Basic Concept:

The existence of man will depend upon his ability to interact effectively with the total environment.

Suggested Pupil Outcomes:

1. Identify the responsibilities of the individual to community health.
2. Identify and interpret the environmental factors which have a significant effect on individual and community health.
3. Compare and contrast the services of voluntary health agencies and county and state health departments.
4. Demonstrate a knowledge of water purification, sewage treatment, air purification, etc., as community responsibilities.
5. Analyze and evaluate the effect of international health problems on their community's health.

COMMUNITY HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Without water and air human life would not continue.	1. Discuss the ways in which water is used by man in the home, industry, recreation and food production. 2. Illustrate and discuss, using pictures of ponds, lakes, rivers and reservoirs, safe sources of water for drinking and recreation. 3. Show the effect of desiccation on a small growing plant. 4. Have students observe water containing organic material that has not been changed for a few days. Have them compare this with chemically treated water. The use of a microprojector might be useful here. 5. Demonstrate how air particles (molecules), too small to see, carry aromatic material (perfume). 6. Discuss air pollution caused by smoke from overcast conditions due to automobiles, industry and open air refuse burning.
Germ free food is essential to good health.	1. Invite the school dietician to discuss precautions taken in the kitchen and lunchroom in preparing food (clean, white clothing, rubber gloves, hair nets or hats). 2. Develop posters illustrating good lunchroom practices and balanced diet. 3. Visit a nearby supermarket and identify ways food is preserved for safe eating. Discuss refrigeration, freezing, vacuum packing and drying.
Our surroundings affect how we feel and act.	1. Discuss the importance of clean and bright homes, schoolrooms, etc. 2. Illustrate and discuss with pictures how proper heating, lighting, colors of walls, furniture and ventilation can affect how we feel. 3. Place a tape recorder in the gymnasium, lunchroom, library or classroom. Record a few minutes of noise level from each room. Associate activity with noise level in different rooms. 4. Illustrate with pictures things which contribute to noise in our environment. Discuss noise that is fun and enjoyable as opposed to noise that is irritating.
Many people work to keep water and air safe.	1. Invite representatives from local industries to discuss how they cooperate to keep air clean. 2. Invite a water department representative to discuss water purification. 3. Discuss how one can tell whether or not water is clean.
Many people work to protect our food.	1. Visit a dairy to observe modern methods employed in processing milk. 2. Discuss briefly controls on meat processing and packaging, restaurant and retail food store inspection. 3. Have the dietician explain reasons for daily inspection of kitchen facilities, proper dress and hair apparel.
Each of us can improve his environment.	1. Have the students draw pictures showing ways they can best care for personal belongings. 2. Discuss individual responsibility in the lunchroom, playground and classroom in relationship to healthful school environment.

COMMUNITY HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Role-play examples in which courtesy is used. (Holding doors, cafeteria lines, taking turns, excusing oneself)
	4. List ways that children can help to promote good health in the community.
	5. Discuss the proper use of drinking fountains and lavatories.
There are living and non-living hazards in our environment.	1. Discuss approaching strange animals and procedures to follow if bitten or scratched.
	2. Draw pictures depicting disease germs; write a story about a germ who delights in bad health habits that help him get around the community.
	3. Discuss the importance of caring for wounds regardless how small.
	4. Chart accidents that occur in school and discuss their causes and prevention.

COMMUNITY HEALTH

4 - 6

Human life depends on water and air.	1. Discuss the nature of air pollution and the role of the health department in this problem.
	2. Pupils write reports on the methods of sewage disposal in the community and the problems related to these procedures.
	3. Diagram and discuss the water cycle.
	4. Demonstrate to class how various foods absorb water.
	5. Have interested students report on dehydrated foods.
	6. Discuss water pollution.
	7. Discuss the function of filters in air conditioners, humidifiers, stove hoods, furnaces and automobile anti-pollution devices.
Radiation in the air has come to be considered a pollutant.	1. Research and report on a comparison of the threat from radiation as compared with the threat from automobile exhausts.
	2. Discuss the various sources of radioactive particles and the hazards to water and food.
	3. Discuss the efforts of the Atomic Energy Commission to maintain surveillance over the amounts of radiation to which the public is exposed, e.g. radium dial watches.
Disposal of sewage and garbage is an increasing problem.	1. Invite local public health official to discuss the laws in your area which govern waste disposal.
	2. Arrange a trip to the municipal sewage disposal plant. Conduct a discussion on local efforts to protect water (proximity of sewer lines to fresh water lines), water purification methods, recycling techniques.
	3. Discuss garbage - waste disposal problems confronting urban areas caused by population concentration and industry.

COMMUNITY HEALTH

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Improper sewage or waste disposal can contribute to the transmission of disease.	1. Discuss raw sewage disposal into streams and rivers and how it affects the drinking water supply. 2. Have students construct posters showing life cycles of flies, mosquitoes and other disease vectors. 3. Discuss how pests such as rats, mice, roaches, flies; thrive on wastes and garbage in open dumping grounds.
We are dependent on many people for safe water and air.	1. Plan a field trip to a water treatment plant or to a conservation area. Follow up with a class discussion on the variety of responsibilities in these areas and a discussion of federal, state and local laws concerning these areas. 2. Ask students to be aware of unsanitary practices and areas in the community. Have them determine if a law is being broken and if there is an agency to correct the problem. 3. Discuss the work being done to prevent pollution in recreational and camping areas; have the students construct posters showing how they could help maintain these areas.
Our immediate surroundings, including the people in the surroundings, have an effect on us.	1. List and discuss the atmospheric conditions which affect an individual's performance in daily activities (temperature, relative humidity, cloudy or bright). 2. List and discuss the peripheral conditions which affect an individual's performance in daily activities (noise level, motion around him, odors). 3. Plan an outdoor trip; investigate knowledge needed about environmental factors; what equipment would be required to maintain comfort?
Many organizations help prevent and control disease.	1. Secure a few journals from the World Health Organization (WHO). Have students read journals and then discuss the variety of diseases in the world, why certain areas have specific diseases that are not found elsewhere; have them use a world map to show the concentrations of certain diseases. 2. Discuss the importance of immunization programs and have a physician or nurse explain these programs to your class. 3. Construct a list of diseases for which vaccines are available and chart pupils in class who have been immunized for each. 4. Read about and discuss the history of disease prevention.
Many organizations help us in preventing disasters.	1. Have representatives of the American Red Cross, Salvation Army and Civil Defense explain their role in such events as floods, tornadoes, fire and nuclear warfare. 2. Compare Red Cross programs in the United States with those in other countries. 3. Discuss school programs and pupil participation in survival plans.

COMMUNITY HEALTH

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The health of humans and lower animals may be seriously impaired by air and water pollution.	1. Review the sources of air and water pollution. 2. Examine a sample of pond water microscopically for organisms. Demonstrate signs of polluted water by observing the appearance, odor and life forms in pond water. 3. Discuss changes in our society that have contributed to water and air pollution. 4. Discuss the human body's ability to filter dust and dirt from the air we breathe. 5. Invite representatives of industry, health department, radiation commission, etc. to discuss pollution problems as related to their areas and what they are doing to solve the problems.
A small amount of background radiation in our environment is normal.	1. Invite an expert on radiation control to discuss background radiation, fallout, cosmic rays and X-Rays with class. 2. Have students learn to use a geiger counter, ion chambers and pocket dosimeters. The science department in your school and the civil defense organization in your community can help with this. 3. Have students identify sources of radiation in school. (X-Ray emissions from tubes used in electronic labs, ultra violet from "black light" sources, glazes on pottery.) 4. Discuss the importance of underground testing of atomic and hydrogen weapons in controlling fallout. 5. Discuss the peace-time uses of atomic power such as electric atomic energy plants, excavation and nuclear powered transportation.
Chemicals are added to water supplies for various reasons.	1. Discuss the use of chlorine and other chemicals in water supplies. Distinguish between disinfectants, algaecides, odor control additives and fluorides. 2. Debate the topic "Fluoridation is beneficial to human health." 3. Demonstrate how to make pure water on outings (boiling, chlorine tablets, bottled water, natural purification).
The cleanliness of food is maintained in several ways.	1. Invite the home economics teacher to discuss and demonstrate safe food processing methods. 2. Invite a local health officer to discuss prevention of food-borne diseases. (tainiasis, trichinosis, salmonella, botulism, amoebic dysentery). 3. Have students research and report on a comparison of food processing and preservation techniques of the past with the present. 4. Discuss safe storage and preservation of food on outdoor trips.
Wise use of insecticides, pesticides, weed killers, and other such poisons is a complex problem.	1. Assemble and summarize current reports regarding insecticides and pesticides from magazines and professional periodicals. Analyze their statements about the effects of these on soil, crops, fruits, animal life and humans. 2. Discuss federal controls on use of insecticides and pesticides.

COMMUNITY HEALTH

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Public health laws are necessary for good community health.	1. Assign individual or committee investigation and reports on: laws regulating food distribution and production, both inter-state and intrastate; regulations and procedures for control of communicable diseases such as tuberculosis, meningitis, hepatitis; regulations concerning radiation; benefits, hazards and regulations in use of pesticides. 2. Invite a township engineer to discuss laws concerning home plumbing regulations, sewage regulations, public rest room regulations and others.
Federal, state and local health agencies interact to create a favorable community environment.	1. Develop a bulletin board display showing United States Public Health Services, state and local, and show interrelationships. Indicate other official, voluntary and professional agencies such as the American Cancer Society, American Medical Association, United States Department of Agriculture. 2. Discuss the relationship of these agencies to the student. Indicate how the students can help these agencies. 3. Discuss the functions of the following in protecting the consumer: Local Health Department; Federal Drug Administration; Better Business Bureau; Bureau of Animal Industry; Federal Trade Commission.

COMMUNITY HEALTH

10 - 12

Medical science is actively engaged in research linking air and water pollution to specific diseases.	1. Review literature on medical research in this area. (Science has established a link between air pollution and bronchial asthma, anthracosis, morbidity, respiratory disease mortality, and cardiovascular disease mortality). 2. Show slides comparing healthy alveolar tissue with that of an individual exposed to pollutants. 3. Have students research work of World Health Organization (WHO) in water pollution control.
Conservation and control of water and air affect our world community.	1. Discuss the following in relation to advance of civilization in the past and in the future: a) availibility of water (human use, transportation, medical, technical, scientific and industrial uses) b) conversion of salt water to fresh water and purification of water c) conservation (recycling, restricting use, efficient use) 2. Discuss the role the Health Department, Fish and Wildlife Service, Conservation Department, Fish and Game Commissions and private organizations play in conservation.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Discuss in small or large groups: a) daily community water consumption and possible conservation; e.g. summer drought seasons. b) economic aspects of conservation as it relates to the tax dollar. c) influence of water upon community economics (recreation, tourism, business opportunities) d) distribution of water from surplus areas to limited supply areas; e.g. California and New Jersey. e) economic aspects of water-borne diseases in a community
	4. Explore and discuss the aspects of the possibility of maintaining a living environment in space and on the ocean floor.
Science and industry are working together to solve the pollution problem.	1. Discuss alternate disposal methods being studied by science and industry, e.g., landfilling, ocean disposal, compositing, wet oxidation, pyrolization and anaerobic digestion. 2. Discuss automobile manufacturers measures to control air pollution and the use of precipitators in controlling content matter in smokestack emission.
Communities need cooperative planning to enhance health.	1. Select and discuss a timely and pertinent regional health problem such as: a) need for hospital or mental health facility. b) air or water pollution. c) rehabilitation center for alcoholics. d) food sanitation. e) noise abatement. f) need for doctors and nurses to meet population growth. g) community involvement in drug abuse 2. Organize class to research a selected health problem from the above list. Discuss the findings in large group sessions. In addition: a) review state and local regulations and laws pertaining to the problem. b) determine current trends and research on the selected regional problem. c) establish needs in this area. d) interview city or county planning commissions to determine how the individual citizen can have a voice in remedying community or county health problems. e) interview men in industry to determine current efforts being made to alleviate the selected problem. 3. Follow-up to large group discussion may be: a) formulate recommendations of regulations or laws which will effect change. b) newspaper articles on the responsibility of individuals, industry,

COMMUNITY HEALTH

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	local, state, and national governments, and regional groups in solving this problem. c) school display of the problem and possible solutions.
Total health transcends local, state, national, international, and political boundaries.	1. Discuss life expectancy of people of different countries in the last century, compared to the present time and discuss the reasons or conditions for contrasting longevity. 2. Have students investigate the activities of the following agencies of the United Nations and report to the class: a) Food and Agriculture Organization b) United Nations Children's Emergency Fund. 3. List and discuss the chronic diseases that are on the increase in this country (cardio-vascular disease, cancer, arthritis, rheumatism, alcoholism). 4. Discuss health regulations of foreign visitors and re-entry of citizens to the United States. Discuss problems of administering these regulations. Compare the health entrance requirements of the United States with those of other countries. 5. Discuss the functions and structure of national organizations as they relate to the state and local level. (National Institutes of Health: National Cancer Institute, Microbiological Institute, National Health Institute, National Institute of Mental Health, National Institute of Arthritis and Metabolic Diseases, National Institute of Neurological Diseases and Blindness.)

COMMUNITY HEALTH

GRADE 13

As man has increasingly triumphed over climate problems, pestilence and famine; he has created an environment which introduces new hazards to human health.	1. Discussion of the interactions between man and the biological, physical, social and ideological environment. 2. Research and discuss the reasons for the changes in man's environment. 3. Research and discuss man's effect on the cycles of nature.
The effects of air pollutents on health are both direct and indirect.	1. Research and discuss both the direct effects of air pollution on man (specific diseases, bronchitis, lung cancer) and indirect effects (loss of plant life, reduced amount of sunlight, reduced amount of oxygen).

COMMUNITY HEALTH

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. Anderson, C. L., *Health Principles and Practice*, (St. Louis: C.V. Mosby Company, 1967).
2. Grout, Ruth E., *Health Teaching in Schools*, (Philadelphia: W. B. Saunders Company, 1968).
3. Mayshark, Cyrus and Leslie W. Irwin, *Health Education in Secondary Schools*, (St. Louis: C.V. Mosby Company, 1968).
4. Pennsylvania Department of Health, Health and Welfare Building, Box 90, Harrisburg, Pennsylvania 17126
5. Wilgoose, Carl E., *Health Education in the Elementary School*, (Philadelphia: W.B. Saunders Company, 1969).

CONSUMER HEALTH

Rationale for Unit:

Sound health is someting we all desire, but cannot buy. Every day we are faced with choices and decisions which represent our investment in health. The appraisal, selection and use of health information, products, and services influence one's state of physical, mental, and social well-being and comprise the instructional area of consumer health. The student consumer today will be the adult consumer of tomorrow, and the patterns established early as a chooser and purchaser may be unconsciously carried into later life, Hence, they should be based from the beginning on sound knowledge and criteria. Scientific fact, truth, and sound criteria must deal with half-truths, pseudo-science, false concepts and outright quackery.

Consumer organizations and governmental agencies are endeavoring to help the purchaser to learn how to spend money wisely and how to distinguish between useful and effective consumer products and those that may be useless or even harmful. The educated consumer is his own best protection. (This unit correlates with Community Health, Nutrition, and Safety Education.)

Basic Concept:

Use of health information, products and services is governed by the application of an individual's criteria.

Suggested Pupil Outcomes:

1. Identify reliable health information from that which is unreliable in advertising.
2. Demonstrate knowledge of health information basic to the establishment of valid criteria for evaluating and selecting health services, practices and products.
3. Demonstrate knowledge of the dangers of medical neglect, self-diagnosis and self-treatment for himself and others for whom he has a responsibility.
4. Demonstrate knowledge in the selection and evaluation of competent medical, dental and other health personnel and services.
5. Demonstrate ability to select and evaluate sound health and accident insurance programs.
6. Demonstrate a knowledge of the functions of consumer organizations and health agencies and differentiate their responsibilities in supporting and promoting health programs.
7. Demonstrate knowledge of the importance of food standards and other instruments for protecting consumers under Federal Law.

CONSUMER HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Protective measures are taken to make certain that food is safe for humans to eat.	1. Visit a nearby grocery store. Discuss government inspection and regulations controlling food safety.
Milk is pasteurized to kill certain germs.	1. Visit a milk company or dairy to see pasteurization of milk and the precautions taken to insure safe milk delivery and to learn of the homogenization of milk. 2. Discuss the contributions of Louis Pasteur.
Foods are packaged and stored to keep them clean and healthful.	1. Demonstrate with the use of various food containers how food is kept safe to eat. Discuss ways fresh and frozen foods are transported.
Our government has pure food laws which protect health.	1. Collect a variety of food labels and discuss what the labels tell about the food that is inside the container. 2. Bring in a sample of a government stamp on meat. Discuss how our government protects the meat we buy.
Advertising often affects what we buy, thereby affecting our health.	1. Discuss television advertising and its influence on what we buy. 2. Discuss different commercials which advertise a certain product. What does each commercial try to make you believe?
Health information, whether correct or incorrect, may come from various sources.	1. Have class discussion about the many different ways in which children learn about health such as television, radio, outdoor advertising, newspapers and magazines. 2. Make a mural or scrapbook and/or a mobile showing all the people and ways in which we learn about health information. 3. Play a game: "I'm Thinking" of the person who mixes the medicine the doctor tells you to take, etc. Adapt above game to: "I'm Choosing" - use health products.
Safety precautions must be observed with the use of medicines and unknown substances.	1. Discuss use of medicine, such as taking what the doctor prescribes and taking only from a responsible adult. 2. Discuss patent medicines and the safe dosages written on each label. 3. Distinguish between patent medicines and prescription medication in regard to potency, consumer protection and reported use. 4. Discuss dangerous products found in the kitchen, bathroom, and garage.

CONSUMER HEALTH

4 - 6

Emotions, family patterns and values influence selection and use of health information, products and services.	1. Have students collect clippings of advertised products and identify words that have emotional overtones. Point out ways people are influenced to buy and use these products. Make a scrapbook, posters or bulletin board display with collected materials. 2. Tape record radio or television commercials relating to *children's* health, and help children to evaluate and discuss advertising.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Write and perform a play such as: "The Medicine Man of the Old West" or "The Medicine Show." Introduce and discuss the terms quack and nostrum.
Religious beliefs, customs, superstitions, faddism, cults, and family influence consumer buying.	1. Check with parents, neighbors, relatives and list some superstitions about health they practice or have knowledge of. 2. Present an appropriate film dealing with health fads, customs and superstitions. 3. Compile a list of customs, that influence health practices. Establish the foundations for such actions or beliefs?
Many health agencies and organizations serve, protect and inform the consumer.	1. Develop a bulletin board display illustrating the health protection afforded by community, state and national agencies.
Laws and regulations protect our health and health of others.	1. Discuss the role of national and international agencies, such as the Food and Drug Administration, Federal Trade Commission, Department of Agriculture, Post Office Department, Health Departments, UNESCO, and the World Health Organization. 2. Visit the school cafeteria and have the cafeteria personnel explain the requirements and inspections they must meet. 3. Analyze and interpret the role of professional groups, such as the American Medical Association, The American Dental Association, and voluntary groups such as the American Cancer Society and others. 4. Visit a food processing plant, food warehouses or frozen food plant; view and discuss the sanitary precautions practiced by the workers. 5. Investigate the laws that protect the consumer such as the Meat Inspection Act, Food, Drug and Cosmetic Act and Milk Act.
Some food labels and advertising are misleading.	1. Collect labels and advertisements to discuss their ambiguity and influence on the consumer.
Possible harm can result from self-diagnosis, self-medication, and the careless ingestion of drugs, medicines and other substances.	1. Distinguish between food facts and mis-information. Have class report on current magazine and newspaper articles. 2. Invite a pharmacist to speak on new drugs and certain manufacturing and safety precautions.
The physician's advice and assistance is important in taking prescribed doses over a period of time.	1. Invite the school nurse or physician to discuss: safe use and handling of hazardous substances, drug side-effects, self-diagnosis, and treatment practices. 2. Prepare a panel discussion on self-medication. Include common ailments handled without medical aid, common remedies and superstitions. 3. Conduct a student-parent "Clean out the medicine cabinet campaign." 4. Discuss safe disposal of unused medicines. 5. Make posters or bulletin board displays on the themes of: "I follow directions on the label." or "I don't follow directions on the label."

CONSUMER HEALTH

4 - 6

CONCEPT	SUGGESTED PUPIL-TEACHER ACTIVITIES
Health specialists contribute to good health.	1. Collect materials illustrating various medical specialities and post them in the classroom and other school locations. 2. Identify and describe the special work of different kinds of doctors. 3. List some factors to be considered in selection of qualified health advisors. 4. Display pictures of gadgets and devices or the real objects sold by quacks. These might be obtained from the Food and Drug Administration or other groups.
Many individuals have contributed to the good health we have today.	1. Have individuals report on persons who have contributed to medical research (Pasteur, Lister, Fleming, Reed, Salk). Relate the work of these persons to increased life expectancy and better health. 2. Develop a bulletin board on health services available to students.
Price does not always indicate product quality.	1. Have students report on amounts of money spent in the United States for amusement, cosmetics, alcoholic beverages, health services, education, vitamins and other products. Contrast these figures and discuss their implications. 2. Compare contents of the same product obtained at high and low prices and quality of items purchased in a discount store. 3. Collect food labels and discuss nutritional value of the listed ingredients and compare prices.
Evaluation of standards, health products and health services requires critical thinking.	1. Develop a set of standards with the class for evaluating health products and services. 2. Define or distinguish between the terms "fortified," "enriched," and "homogenized." 3. Display items or labels from products that are available in various "health food" stores. Evaluate these items on the basis of standards. 4. Briefly discuss health insurance; specifically, school insurance protection.

CONSUMER HEALTH

7 - 9

Discrimination is critical between reliable and unreliable health information and advertising.	1. Make a display (books, posters, bulletin board) of the common sources of health information (family, friends, written word, salesmen, agencies, schools, radio and television, doctors). Discuss how these influence what one believes. 2. Develop criteria through class discussion for evaluating health information and values in making choices and decisions. 3. Interview radio or television personnel to discuss techniques utilized in communications. 4. Use clippings, tapes, recordings, and other samplings of health advertising and discuss techniques used: e.g., appeals to fear, to pride, imitation (famous people), social approval, authority of endorser (doctor says, research says), promise of miracles, and partial truths.

CONSUMER HEALTH

7-9

CONCEPT	SUGGESTED PUPIL-TEACHER ACTIVITIES
The values of advertising are many and varied.	1. Discuss the value of advertising in making new products and their merits known: as a means to save money, as a protection for the honest manufacturers, and also as the industry's vital position to the nation's economy.
There are many types and varieties of drugs and health products.	1. Invite a pharmacist to discuss and describe the definition of proprietary medicine, prescriptions, drugs, patent medicines and nostrums. 2. Discuss the role of the modern pharmacy in making and preparing medicines. 3. Present an appropriate film on consumer protection of drugs and health products.
Self-diagnosis and self-treatment can endanger health.	1. Discuss medical folklore, old wives' tales and superstitions and evaluate how these misconceptions could impair health. Discuss hazards of self-diagnosis and self-medication. 2. Investigate the limitations of the FDA in controlling and assuring safety in the use of patent medicines and cosmetics. Discuss the difficulties in testing. 3. Have the class list and discuss the proper use of products used in their homes which are sold over drug counters: e.g. deodorants, skin medications, hair removers, dyes, mouth wash, etc. Examine the advertising for each of these and their claims and safety in use.
Quackery can be identified.	1. Invite a representative from the district FDA office to discuss and demonstrate fradulent cure-all devices. 2. Present an appropriate film illustrating illegal practices in medicine and treatments.
Select and utilize qualified and competent medical, dental, and allied health personnel and services.	1. Have class develop reports on health personnel including qualifications, training, license and needs they satisfy. (Refer to the Health Careers Unit.) 2. Present an appropriate film illustrating professional preparation and practice in medicine and allied fields.
Knowledge of personal health and accident insurance is important in case of serious injury or illness.	1. Report on school accident insurance. 2. Ask students to check with parents to see if student has health or accident insurance; if so do they carry identification? 3. Have students make out medical identification cards. Indicate health insurance coverage and pertinent emergency information such as blood type, allergies, etc.
Many agencies serve, protect, and inform the health consumer.	1. Investigate state and local restrictions imposed on solicitors and door-to-door salesmen. 2. Prepare displays of the functions of health organizations: UNESCO, UNICEF, FDA, Post Office Department, Voluntary Health Agencies, Local Health Departments, State Health Department, Better Business Bureau, etc. 3. Invite food store manager to discuss consumer protection.

CONSUMER HEALTH

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Special dietary foods must be informatively labeled.	1. Examine and evaluate advertisements and labels in dietary foods for special uses and directions. 2. Have a student report on the specific labeling of diet foods.
Standards for the processing of foods are defined by the Food and Drug Administration.	1. Define terms as: dehydration; frozen; freeze drying; pasteurized; aseptic (high temperature) canning; dehydrofreezing and irradiation.
The FDA and nutritionists formulate the criteria for supplementing foods.	1. Discuss the term "food additives" and how they are indicated on labels. 2. Have a student report on the Food Additive Amendment, 1958, and its effect on the consumer and food technology.

CONSUMER HEALTH

10 - 12

Reliable sources of health information can help the consumer use established criteria to judge health products and services.	1. Invite a professional person from a voluntary health agency to discuss the role of voluntary agencies in informing the consumer of health products and services. 2. Have the students form the habit of looking for and collecting news and magazine articles relating to health services and products. 3. Compile a listing of sources from which the consumer can get reliable health information.
Exaggerated reports of medical information or false advertising may result in emotionally based desires for product or services.	1. Discuss the role of education, socio-economic status, peer group influence and the effects of advertising on consumer buying habits. 2. Present an appropriate film illustrating health products advertising.
Organizations, agencies and laws have been developed by society to protect the health of the individual and the community.	1. Have students report on specific health agencies—their role and function as organizations. or Have students select a specific health problem such as overweight, skin problems, or dandruff and write a paper on how they would seek health information and/or select a doctor. 2. Discuss the difference between information gained from parents and friends; television and radio; newspaper and magazine; from scientific sources and from other non- or pseudo-scientific sources. Evaluate the knowledge imparted and the motive involved.
Health problems are best dealt with by appropriate specialists.	1. Have the class prepare and define a list of the various types of doctors and health specialists. Investigate the special function of each. 2. Discuss techniques used in selecting professional medical help.
Personal criteria aids in the evaluation and selection of health products.	1. Have class develop criteria for judging qualifications of individuals, manufacturers, and distributors recommending, prescribing or administering health products.

CONSUMER HEALTH

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Self-diagnosis and inadequate safety precautions may endanger health.	1. Review safety precautions in taking medicine, also safety precautions to be taken with medications in the home. Include the importance of reporting unusual reactions of persons to medications prescribed by a physician. 2. Discuss the dangers of ignoring illness and unusual symptoms, and the importance of giving accurate information of all symptoms to a physician.
Ethical codes exist for the practice of medicine, dentistry, and allied health professions.	1. Discuss the social, emotional, and economic reasons why people go to a charlatan. Investigate the areas of quackery such as food, drugs and gadgets. 2. Discuss criteria for identifying illegal health practices. Discuss where and how to report illegal and unethical practices.
Each family should be familiar with health services available.	1. Develop a list of health services that are available in the local community. 2. Organize a field trip or invite speakers from hospitals, clinics, other sources or organizations. 3. Assume you are moving to a new community with your family. Describe the procedures you would follow in choosing medical and dental care advisors. Include: when you should institute this search and what sources of information you would use to make your decision.
Health products such as food, food additives, cosmetics, drugs, medications are often selected on the basis of hearsay, emotional feelings, past experiences, social forces and pressures.	1. Using criteria already developed earlier in this unit evaluate items or specimens collected by teacher and students. This activity may also apply to controversial health issues such as fluoridation, drug abuse and sex education.
Standards for the processing and labeling of foods are defined by the Food and Drug Administration.	1. Review with the class food processing terms such as dehydration, frozen, freeze drying, pasteurized, homogenized, asepic canning, irradiation, dehydrofreezing. 2. Review with students the Food Additive Amendment of 1958 and its effect on the consumer and food technology.
Medical care is an important part of the national and family budget.	1. Have the students become familiar with the various types of medical care insurance. Make a chart displaying various kinds, advantages and disadvantages.
Medical care insurance is of two basic types: voluntary health insurance and compulsory health insurance.	1. Conduct a debate: Compulsory or public health care insurance vs. voluntary health care insurance. 2. Discuss the question: How can an individual evaluate and select an insurance coverage program? Use outside speakers, i.e. Blue Cross-Blue Shield representative and other insurance agency representatives. 3. Refer to Grade 7 - 9 activities pertaining to health insurance.

CONSUMER HEALTH

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Practices of manufacturers reflect consumer wishes.	1. Search out examples of advertised products in newspapers and periodicals in which the manufacturer attempts to satisfy a current fad, i.e. curbing smoking habit and controlling overweight.
Food standards promote honesty and nutritional advances.	1. Discuss FDA policy aimed at maintaining good nutrition as well as correcting deficiencies in diets for significant segments of the population. 2. Research the food laws and standards suggested by the World Health Organization or the United Nations Scientific Organization.
Analyzing health information should become a personal practice.	1. Investigate the use of statistical statements in advertising. Ask questions such as: Who says so? How does he know? What's missing? Does it all make sense?
Knowledge and common sense offer the best protection against health frauds.	1. Review the sources from which you can obtain reliable unbiased health information such as the family physician, local medical society. Better Business Bureau, American Medical Association, Federal Food and Drug Administration, etc.
Approximately 5% of one's lifetime income is spent for health and medical care.	1. Investigate several *types* of medical care insurance coverage and evaluate the underlying reasons for the selection of a particular type.
Wisely purchased health insurance achieves individual and family security.	1. Make a report, in chart form, on the major categories of medical care insurance, their advantages and disadvantages. 2. Obtain some samples of insurance policies, analyze in terms of their coverage and interpret the small print. Divide into categories of voluntary and compulsory. 3. Debate the issue: Compulsory or public health care insurance vs. voluntary health care insurance. 4. Have each student investigate his family's medical cost for a year or his own, including health insurance. Evaluate the coverage in relation to need.
The high cost of doctor and hospital fees make medical care insurance increasingly necessary.	1. Develop an insurance coverage program in accord with individual needs, and appraise the reasons for choosing the particular coverage. 2. Develop an insurance coverage program to cover an average family.

CONSUMER HEALTH

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Medical Association, *Today's Health Guide*, (Chicago: American Medical Association 1965).
2. *Consumer's Report*. Mt. Vernon, New York: Consumer's Union of United States, Inc. (published monthly).
3. Jones, Kenneth L., Louis W. Shainberg, Curtis O. Byer, *Health Science*. (New York: Harper and Row Publishers, 1968).
4. Pennsylvania Department of Education, Bureau of Vocational, Technical and Continuing Education, Instructional Consultation Division, Home Economics, Box 911, Harrisburg, Pennsylvania 17126
5. School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design*. (St. Paul: 3M Education Press, 1967).
6. U. S. Department of Health, Education, and Welfare, Consumer Protection and Health Service, Food and Drug Administration, Washington, D.C. 20204

DENTAL HEALTH

Rationale for Unit:

Are good teeth really important to appearance and health? Watch people when they smile ... or look into the mirror. Untreated dental conditions are among the most common of all diseases affecting the American people. If tooth decay and dental diseases were as dramatic as poliomyelitis, we would have to recognize the dental problem as a major health problem. Dental surveys reveal startling facts about dental caries, inflammation of the gums, irregular alignment of teeth and extracted teeth. Through education, a large percentage of these dental ills can be prevented or controlled. The lack of knowledge and application of good dental health practices on the part of parents and children often results in neglect of early and regular dental care; frequent and excessive consumption of sweets; failure to practice good oral hygiene habits; fear of dental treatment and failure to include funds for dental care in the family budget.

The school must attempt to help the teacher recognize the child with dental health problems and expend every effort possible to coordinate efforts of parents and agencies in providing dental care. A good school dental health program will involve education, prevention, and treatment. This unit will deal with the educational phase of the program as it pertains to the child and his parents. Because dental health is known to affect the general health, appearance, and social adjustment of an individual throughout his lifetime, education can be a valuable asset in helping to control dental disease, correcting defects and establishing good oral hygiene habits.

Some of the understandings in this unit will correlate well with the units on Safety Education, Nutrition, Physical Fitness, Health Careers, Community Health and Anatomy.

Basic Concept:

Through the observance of good dental health practices, including personal and professional care, proper diet and oral habits the promotion of total health is effected.

Suggested Pupil Outcomes:

1. Interpret the significance of caring for the mouth and teeth through practices of good dental health.
2. Demonstrate a knowledge of preventive procedures leading to good dental health such as visits to the dentist and proper nutritional habits.
3. Evaluate the relationship of dental health to general health and appearance.
4. Demonstrate a knowledge of tooth structure and function for the purpose of better understanding the value of good dental care.
5. Demonstrate an ability to differentiate between reliable dental information, products and services from that which is unreliable.
6. Identify and interpret personal responsibilities in meeting community dental health needs.

DENTAL HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The use and functions of teeth are many and varied.	1. Discuss the importance of teeth for eating, speech, and appearance. 2. Show appropriate film.
Teeth undergo changes in size, number and kinds with age.	1. Make a bulletin board display illustrating types of teeth and their functions. 2. Count your own teeth. Identify each and compare the number with each other. 3. Discuss the loss of primary teeth (deciduous) as a normal process unless there is tooth decay or accident. 4. Have children share the experience of losing a tooth. 5. Discuss a new baby and the fact it has no teeth.
The shape and structure of teeth dictate their purpose and function.	1. Draw pictures showing tooth inner structure (cross-section). 2. Save and observe primary teeth as lost by class members. Note cavities, stains and any part of root that is left. 3. Draw or construct a mural showing animals, their teeth and the particular foods they consume. 4. Draw, color and possibly animate different teeth. Create a play, using different parts of teeth as the characters. 5. Bring animal and human teeth to class and discuss. 6. Have students bring their pets to school; observe the teeth of each pet and compare.
Daily mouth care is important to dental health.	1. Display a collection of magazine pictures about dental health on bulletin board or arrange the room with pictures, models and objects pertaining to various aspects of dental health. (Dental tools, animal teeth, human teeth, tooth models - healthy and decayed, toothbrushes, etc.) 2. Prepare posters or display on dental health. 3. Have children prepare a daily brushing chart to be taken home and hung in the bathroom to record when their teeth have been brushed. 4. Demonstrate with large set of teeth and toothbrush the proper way to brush teeth including use and care of toothbrush. 5. Show an appropriate filmstrip demonstrating proper methods for the care of teeth. 6. Demonstrate ways of cleaning teeth when a brush isn't available (swish and swallow, eating an apple, etc.). 7. Distribute toothbrushes and small tubes of toothpaste for all children to take home and use. 8. Make tooth powder in class. Students mix the following ingredients in the proportions indicated: 1 teaspoon salt, 2-3 teaspoons baking soda, and a drop or two of peppermint, wintergreen or cinnamon. Have pupils take some home to use when brushing teeth.

DENTAL HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Food in all forms affects the teeth.	1. Make a bulletin board display of the decay formula. "Acid and Dental Plaque and Susceptible Tooth Structure = Decay". 2. Role play the villain sugar or candy attacking a healthy tooth. (A toothbrush brigade would involve whole class.) 3. To show that acid will weaken substances containing calcium (such as tooth enamel) place a whole egg in a bowl of vinegar (acetic acid) for about 24 hours. The egg shell will become soft as the vinegar decalcifies the shell. 4. Discuss the value of certain foods such as apples, celery, carrots and oranges as tooth cleaners. 5. Display and discuss magazine pictures showing good and bad foods for teeth using a "Happy and Sad Tooth" chart. 6. Observe the progress of decay in two apples by breaking the skin of one and leaving the other intact. Place both apples in a place where they can be seen for a few days and relate that to what happens in the dental decay process. 7. Have each child eat a cracker and with his tongue feel the coating of food on the teeth. Then have each student eat a piece of carrot, celery, or apple and note how much cleaner the teeth feel. 8. Have children prepare a list of nutritious snack-time foods. 9. Have a "bunny rabbit" party in which celery, green peppers and carrot sticks are served and discuss their importance in helping to clean the teeth. Invite the parents to attend.

DENTAL HEALTH

4 - 6

Teeth contribute to appearance, digestion and speech.	1. Review why we need teeth. (smile, appearance, chewing, talking). 2. With the use of a tape recorder practice sounding letters of the alphabet to demonstrate the importance of teeth in speaking. 3. Make posters illustrating how teeth affect appearance. Be cautious of children who may have dental problems to avoid embarrassment. 4. Make exhibit of smiling children on bulletin board. 5. Discuss the practice of chewing our food well to aid the process of digestion.
Structure and kinds of teeth have specific purposes.	1. Borrow X-ray photographs from a local dentist to study tooth structure. 2. Discuss and diagram a tooth, showing and labeling each part and naming its function. 3. Review the types of teeth various animals have and relate the kind of teeth they have to the kind of food they eat. 4. Examine extracted teeth obtained from local dentist; identify decay, nerve, root and gums. 5. Discuss how teeth grow by examining a model of teeth and jaw. 6. Make a chart naming different kinds of teeth and showing what approximate ages they arrive.

DENTAL HEALTH

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Dental health is affected directly by the variety and selections of food we eat.	1. Make a scrapbook or prepare a display showing foods with high carbohydrate content and low carbohydrate content. Ask the dental hygienist for a table of foods with "Hidden Sugar." 2. Estimate the cost of the "sweet tooth" habit, and compare it with the established cost of more wholesome food. 3. Have students observe lunchroom menus for a week and list the foods containing nutrients for dental health and foods that are nature's "toothbrushes." 4. Conduct a small group demonstration. Have six students eat chocolate cookies and have one brush with water, one swish and swallow, one eat an apple, one eat a carrot, and one eat celery and one do nothing. Compare the residue left on teeth and ask students to describe each cleaning method. 5. Let students observe the results of cutting marshmallows and apples with a knife to demonstrate differences as to how food sticks to the teeth. Apply the result to dental hygiene. 6. Study diet plans for the control of tooth decay. Invite dentist to explain more about this and the relationship of sweets to tooth decay.
A primary key to successful dental health is regular personal care.	1. Survey the class and chart the brushing habits of the students. Encourage brushing and/or some personal care immediately after meals. 2. Demonstrate the proper way to brush teeth and discuss the importance of the length of brushing time. 3. Illustrate effective brushing by performing the disclosing tablet test. Seek the aid of the school nurse or dental hygienist in completing this demonstration.
Tooth decay is caused by acids forming in the mouth.	1. Discuss the decay process through posters on the bulletin board. 2. Have pupils show the acidity or alkalinity of mouth using pH paper. Give pupils strips of paper, instructing them to soak sterile cotton swabs with saliva and apply to the paper. The degree of acidity or alkalinity can be determined by comparing resulting color of paper strips with color chart provided by manufacturer. A pH of 7 indicates a neutral mouth; below 7 indicates an acid mouth; and above 7 shows an alkaline mouth. 3. Review the results of the K - 3 level experiment with the egg shell and vinegar. 4. Illustrate how acids dissolve calcium from sterilized, extracted teeth. Place one tooth in 1% solution hydrochloric acid and another in plain water. Allow to stand for a week and note the differences.
Regular dental check-up by a dentist helps to control dental disorders.	1. Make a study of modern dental care as compared with that of 50 years ago. 2. Discuss with the class the value of regular dental checkups. 3. Draw pictures of healthy and unhealthy teeth and discuss mouth and tooth diseases. 4. Discuss malformation of teeth and how teeth depend on each other for alignment.

DENTAL HEALTH

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	5. Investigate the values of X-ray films on dental health and treatment. 6. Write a paragraph in answer to the question "What must we do to take care of our teeth?"
Habits of safety in play must be developed to avoid injury to teeth.	1. List and discuss habits and other behavior that might damage teeth. Some examples are: biting hard objects, opening bobby pins, cracking nuts, chewing pencils, chewing ice, chewing hard candy, bumping drinking fountains, falling off bicycle or skates. 2. Determine how many class members have had accidents injuring teeth. Discuss how they might have been prevented. 3. Write safety jingles, limericks, and slogans pertaining to oral safety. 4. Make posters encouraging safe play and display them in appropriate areas. 5. Appoint or elect playground safety monitors. 6. Invite a dentist to class to discuss safety practices which may prevent accidents involving the mouth.
Critical thinking must be applied to selecting products pertaining to dental health and dental services.	1. Ask class to bring in toothpaste advertising and compare and evaluate their products and appeals. 2. Compose scientifically correct commercials. 3. Report on how to be a wise consumer of dental products.
Community resources provide help for dental care.	1. Find out what nearby towns have fluoridated water systems and investigate how the oral health of the community has been affected. 2. Visit the community water plant and observe how water is fluoridated. 3. Examine and discuss information about fluorides and fluoridation of water. 4. Organize a panel discussion which brings out the pro and con arguments of fluoridation.

DENTAL HEALTH

7 - 9

Healthy teeth and gums are important to appearance, speech and the enjoyment of living.	1. Use disclosing tablets for self-testing. (Local dentist or local dental society can tell you where to get supply.) 2. Plan a classroom or bulletin board display which shows that a good, clean mouth free from disease and tooth decay is: a) a beauty aid b) important in smiling, laughing, talking and displaying your personality c) needed to chew your food well d) an aid in obtaining good employment e) necessary to keep you feeling well and free from pain at all times f) an aid in making and keeping friends g) in general, an indication of good body health and care 3. Communicate with the Pennsylvania Dental Association requesting materials on dental health.

DENTAL HEALTH

7-9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Each part of the dental structure serves an important purpose.	1. Use cross section of tooth model to discuss specific purpose of each part of tooth. 2. Investigate and report to the class on the relationship of teeth to digestion, including functions of the tongue, taste buds and salivary glands. 3. Discuss growth and development of teenage teeth. Use a model of teeth and jaw.
Dental neglect due to poor dental practices has far-reaching effects which may be prevented or corrected.	1. Have the class report on various oral disorders and diseases such as: malocclusion, periodontal deviations, missing teeth, erosion and abrasion. Emphasize prevention and treatment. 2. Illustrate and discuss the stages of tooth decay. 3. Make charts showing decay rate at various ages. Emphasize average decay rate in teenagers. 4. Discuss habits that can affect periodontal diseases, chewing soft food, lack of massage of gums, continued use of liquid reducing diets, picking teeth with pin or hard objects, and neglect of oral hygiene. 5. Make posters of malocclusion to illustrate how it can affect personality: shyness, speech, smiling, group acceptance, grooming, social life, dating and employment. 6. Interview dentist about causes of malocclusion: discuss inherited and acquired tendencies.
Mature teeth are susceptible to decay by certain foods.	1. Have small groups prepare a menu of snacks or appetizing foods that would be substitutes for sweets. 2. Have students keep a food intake record for 2-3 days and analyze the number of servings of desserts and between-meal snacks of sweets eaten. 3. Conduct a round-table discussion on chewing gum and its relation to dental health, appearance and speech.
Prevention of dental accidents requires individual practice of safety measures.	1. Request a football team member to report and demonstrate the use of mouth pieces. 2. Collect, display, report, or discuss pictures and articles on dental accidents. Develop a list of the most prevalent accidents which cause dental damage in the 10 to 15 age group. 3. Research insurance programs covering dental injuries.
Clean, well-cared for teeth save money, time and discomfort.	1. Compare dental expenses for minor caries as opposed to more involved work such as root canal, or dental bridge. 2. Contrast early and regular dental care with neglect: Pain of toothache, poor mastication, loss of teeth, drifting of teeth, small cost of regular care, appearance of good teeth. Caution: Be reminded that all dental problems are not the result of neglect.

DENTAL HEALTH

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Many factors influence our choices of products and services.	1. Discuss advertising and its influence on choice of oral and dental products. Correlate regular dental hygiene practices and halitosis. 2. Evaluate electric toothbrushes, dentrifices, flosses, water irrigators. 3. Discuss the fallacies that cause people to have a hesitancy to seek dental care.
The dental needs of the community must be recognized and studied for methods of prevention and correction.	1. Discuss the fluoridation problems in the community. How does a community start fluoridating its water supply? Develop a panel discussion or debate on water fluoridation. 2. Compose a letter to the water commission requesting information about the natural fluorides in the local water supply. 3. Discover how your community may provide dental care for children when parents cannot afford it. 4. Invite a school or public health representative to discuss available public health dental services. 5. Promote National Dental Health Week in school and community.
Specialized personnel treat dental disorders.	1. List dental services provided by the school system and discuss the availability of other services. 2. Investigate the cost of professional dental education and equipping a dental office. 3. Investigate the field of dentistry and its related field as a career for the future. Discuss opportunities in private practice, public health, industry, hospital, dental research and the armed services. 4. Explore the specialities of dentistry, such as oral surgery, orthodontia, periodontia, prosthodontics and oral pathology. 5. Discuss modern dental equipment and new methods of dentistry.

DENTAL HEALTH

10 - 12

Some local, national and international dental needs require community action.	1. As a citizen you may be called upon to vote "yes" or "no" on fluoridation. Prepare yourself to vote intelligently. Refer to pamphlets, anti-fluoridation literature and graph the incidence of dental decay. 2. Discuss the effects of fluoride on enamel and compare topical application with that of adding fluoride to drinking water. 3. Study controlled experiments on fluoridation and cite results. 4. Investigate approaches in securing fluoridation of public water supply. 5. Make a survey of your community listing all the facilities for providing dental care. a) proportion of dentists to general population. b) how does your community or county provide for people who cannot afford dental care. c) use facts found in surveys as basis for a report for publication in school or local newspaper. d) consult with County or State Dental Dental Society.

DENTAL HEALTH

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Dental neglect is expensive for the individual, family and community.	1. Graph the cost of maintenance of dentures vs. maintenance of own teeth. (Include cost of linings, cleaning, and fillings.) 2. Make charts on comparative costs of long-term care with dental supervision and long-term neglect. (Consult dental laboratories or dentists.) 3. Invite dentists (or go for interview) to speak to class in mechanics and cost of partial plates and dentures.
There are various methods of financing dental care.	1. Investigate various insurance plans for dental care. 2. Interview dentists about various methods of financing dental costs.

DENTAL HEALTH

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Dental Association, Bureau of Dental Health Education, 211 East Chicago Avenue, Chicago, Illinois 60611
2. Grout, Ruth E., *Health Teaching in Schools.* (Philadelphia: W.B. Saunders Company, 1968).
3. Irwin, Leslie W., Harold J. Cornacchia, and Wesley M. Staton.(St. Louis:C.V. Mosby Company,1966).
4. Willgoose, Carl E., *Health Education in the Elementary School.* (Philadelphia: W.B. Saunders Company, 1969). (Refer to Chapter 11)

DISEASE CONTROL

Rationale for Unit:

Disease is a harmful departure from normal caused by destructive forces from within or without that interfere with normal function of the body. It is a changing condition produced by a malfunction in one or more of the body's systems.

Mankind has struggled constantly against disease in one form or another. Due to the lack of scientific information prior to the nineteenth century man's efforts to conquer disease were based on myth and superstition. An aggressive attitude toward disease control was not possible until the basic facts as uncovered by Pasteur and Koch were developed. The advances made by scientific medicine in combating the prevalence and force of smallpox, bubonic plague, typhoid, syphilis, cholera, yellow fever and malaria are results and evidence of man's persistence to overcome disease.

An historical study of those diseases, such as polio, tuberculosis and cholera, relegated to a lower level of concern for today's students, hopefully will develop an appreciation of the work of dedicated men and women. It is also intended to give valuable understanding for further prevention and research here and in other countries.

The continued high death rate from the non-communicable diseases of childhood to middle age presents serious problems to medicine and educators. The answer to the problem of these diseases is not wholly clear, but the fact that an understanding of personal and community hygiene is necessary to help people live more wholesomely seems clearly indicated.

This unit deals not so much with specific diseases as with an understanding of the salient factors of importance for all students to acquire if they are to cooperate intelligently in the control and prevention of disease.

Present-day needs, the age level of the students with whom you are working and the interest of these students should be the basis for the selection of the specific diseases to be studied. Since respiratory diseases, cardiovascular diseases and cancer are leading causes of death and disability at present, they are dealt with at some length in this unit.

Through the study of disease control, the student can become a well-informed member of the community who will have confidence in right action and will show his recognition of the obligation he has as a responsible citizen to society to use all protective measures for himself and his family, and to insist that other members of society do likewise. He will not remain unprotected and dangerous to his community when proved and protective aids are available.

It is hoped that the use of this unit will help to close the gap between the discovery of new methods and techniques and their application in reducing illness and diseases that afflict mankind.

This unit correlates well with Community Health, Anatomy, Physiology, Mental Health, Human Sexuality, Dental Health and Smoking.

Basic Concept:

Man is in constant competition with other organisms for the existing energy on this planet. Some of these organisms cause disease. Through medicine, science, research and education, man shall conquer disease.

Suggested Pupil Outcomes:

1. Examine and interpret the historical aspects of disease control and prevention.
2. Demonstrate a knowledge of the cause - effect relationship as it applies to disease.
3. Demonstrate a knowledge of the universal distribution of disease.
4. Discover and interpret the responsibility for prevention and control of disease within oneself and others.
5. Describe the disease cycle.
6. Demonstrate knowledge of the nature of causative agents of disease, reservoirs of disease, means of exit of organisms from the body, ways and means of disease transference and methods for preventing transmission.
7. The ability to evaluate the health literature with which we are being confronted.
8. Interpret the programs of local, national, and international associations whose function it is to control disease.

DISEASE CONTROL

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Disease may be caused directly from germs.	1. Discuss the fact that we share the earth with other living things - some of which can harm us when they get into or on our bodies. 2. Discuss the relationship between filth, germs and disease. 3. Tell stories concerning how children once believed in demons, evil spirits and darkness as causes of disease. Caution: Do not transmit an element of fear. 4. Stress how cleanliness can help to prevent disease.
The spread of disease may result from person to person contact.	1. Have students draw pictures illustrating ways germs travel, such as by touch, various insects, rodents, milk, water and food. 2. Have students pass a ball representing germs to one another. Call the ball "chicken pox", "flu" or some other childhood disease. Discuss exposure and contamination.
Illness and disease may cause changes in our physical and emotional condition.	1. Discuss the fact that the ill feeling is nature's way of telling us that something is wrong with our body. 2. Discuss the role of the doctor in using your feelings to find out what is wrong. 3. Discuss with the students the importance of telling adults when they do not feel good.
We can help ourselves to stay healthy.	1. Discuss the importance of using your toothbrush, handkerchief and drinking glass in germ control. 2. Demonstrate how germs enter the body through cuts in the skin. Explain how to cleanse wounds and why this is important in the prevention of disease. 3. Discuss the importance of immunization and vaccination. 4. Assist students construct a bulletin board display on good health habits. 5. Help children to have an awareness for wearing the proper clothing in different types of weather.
Many people can help us to get well when we are ill.	1. Ask children to tell of individual experiences when ill—who was first to help and what did each do. Have them construct posters showing the people who helped. 2. Demonstrate, through role play, what might happen without proper care.
An untreated disease may lead to another, more serious disease.	1. Discuss the importance of proper care and adhering to the doctor's advice if one has a disease. Cite examples of minor illnesses which can lead to pneumonia, heart problems, hearing loss, and other complications.
We can help each other to remain healthy.	1. Have students role play the proper way of behaving around others when you are ill. Demonstrate how to prevent spread of disease when coughing, sneezing, eating, talking, etc. 2. Discuss the roles of doctors and nurses in caring for the sick.

DISEASE CONTROL

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	Respiratory Diseases
Our respiratory system performs many important functions.	1. Have the class observe a few students after exercising for a minute. Explain the increase of breathing rate. Illustrate the body processes involved. 2. Have students exhale onto palm of hand to feel heat and moisture exhaled from lungs. Explain.
Germs can get into your respiratory system.	1. Discuss the importance of a "runny" nose when one has a cold. Relate this to irritation caused by germs. 2. Role play - How can cold germs get into the body? 3. Construct a poster illustrating the health habits that help to prevent germs from entering the respiratory system.
We can avoid contacting respiratory diseases.	1. Discuss the relationships of good health habits and keeping well. Have students construct a list of good health habits. 2. Use an atomizer to demonstrate how coughing and sneezing spread germs. Contact local TB and Health Society for photograph showing actual range of cough and sneeze spray.
Respiratory diseases are a public concern.	1. Invite the school nurse to talk about tuberculosis and the tuberculin testing program. 2. Contact the local or state TB and Health Society for information and materials on respiratory diseases. 3. Discuss relationships of air pollution to respiratory diseases.
	Circulatory Diseases
The heart is the key part of the circulatory system.	1. Discuss how the heart works or invite the school nurse or doctor to do so. 2. Have the students listen to a classmate's heart with a stethoscope; discuss why a doctor uses such an instrument.
The circulatory system is similar to a transportation system.	1. Demonstrate the functions of the blood and complete arterial structure. 2. Compare the circulatory system to delivery trucks bringing food to a house and sanitation trucks taking wastes away. 3. Present a film on the circulatory system.

DISEASE CONTROL

4 - 6

Many persons have contributed to our present knowledge about diseases.	1. Divide class into committees; have committees select and report on a scientist who has made a significant contribution to human health, such as Jenner, Lister, Pasteur, Salk and others. 2. Use the bulletin board to illustrate the great discoveries made by these individuals.

DISEASE CONTROL

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
We share the earth with many other living things; some of them are microorganisms.	1. Present to students prepared slides of microorganisms. 2. Have students draw some of these organisms. 3. Develop an appropriate vocabulary: protozoan, microorganisms, virus, bacteria.
Microorganisms grow rapidly.	1. Discuss the ability of minute organisms to reproduce rapidly. 2. Discuss the conditions necessary for growth and reproduction of bacteria. 3. Grow gardens of bacteria in Petri dishes; some under ideal conditions of light, heat and moisture; others under less than ideal conditions. Discuss the results.
Microorganisms may cause disease.	1. Discuss the meaning of disease. 2. Have students discuss their own experiences with childhood diseases. Describe prevention measures taken to avoid certain diseases. 3. Discuss the fact that not all disease is carried by microorganisms.
Our bodies have built-in defenses against many diseases.	1. Discuss the protective function of the skin and that of the mucous lining in nasal cavities. 2. Illustrate and study the functions of white blood cells engulfing foreign bodies. 3. Introduce and discuss the term natural immunity.
Effective disease control involves an individual contribution.	1. Conduct a class discussion of all possible ways to prevent the spread of disease. 2. Have students develop individual posters depicting ideas about disease control. 3. Ask children to discuss disease prevention with other adults and parents. Bring individual discussions back to class.
Disease may spread from community to community and from country to country.	1. Discuss how a disease organism may travel from country to country. Include animal quarantine. 2. Examine community procedures for epidemic control. Consult with school physician. 3. Investigate the role of our immigration and custom authorities in controlling disease transmission from foreign countries.
Organizations help to fight disease on a local and world level.	1. Examine the function of voluntary health agencies. 2. Invite a local public health official to speak to the class about work of health agencies.
	Cancer
Cancer is a disease involving abnormal cell growth.	1. Show students cancerous plant growths such as galls and burls. Explain that animal cells can grow in this manner. 2. Discuss the effects of a weed invasion in a flower bed and relate this to abnormal cells invading normal cells.

DISEASE CONTROL

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The increase of cancer presents a major health problem of concern to all persons.	1. Investigate cancer statistics; types, detection and cure. 2. Discuss self-examination and the importance of recognizing the danger signs.
Some of our health habits can increase the risk of abnormal cell growth.	1. Research and examine the evidence linking cigarette smoking and lung cancer. (Refer to Smoking Unit for additional information.) 2. Discuss the results of some of the cancer research done with animals.
Many types of cancer can be cured.	1. Discuss how good health habits can help in the early detection of cancer and other diseases through annual check-ups, specific examinations and tests, self-examination and communication with adults. 2. Discuss the work of the American Cancer Society in the fight against cancer. Invite a representative to class.
	Respiratory Diseases
The respiratory system may be impaired or irritated by disease.	1. Have students examine diseases of the respiratory system and indicate which part of the system is affected. 2. Have students discuss their own experiences with respiratory diseases.
Respiratory disease control is an individual, community and world problem.	1. Discuss how individual health habits may affect the body's resistance; relate these habits to respiratory disease. 2. Divide the class into groups; have each group research organizations concerned with respiratory disease on the community, state, national and world level. Follow up with brief oral and/or written reports on committee findings. 3. Discuss the role of the individual in controlling respiratory diseases.
	Circulatory Diseases
The circulatory system is made up of a variety of structures.	1. Review transparencies or charts of heart and major blood vessels.
Diseases of the circulatory system are many.	1. Discuss or invite a doctor to discuss some of the more common heart and circulatory problems. Examine possible preventive measures.
The circulatory system is influenced by many factors.	1. Discuss the effect of cigarette smoking on the rate of heart beat. 2. Demonstrate the effect of exercise on circulation. (Refer to Physical Fitness Unit for additional information) 3. Discuss how foods, fatigue and rest affect the circulatory system.
Many groups and agencies are engaged in research concerning the circulatory system.	1. Invite a representative of your local chapter of the American Heart Association to discuss the work being done to solve circulatory system problems. 2. Investigate the control, treatment, education and current research on cardiovascular problems.

DISEASE CONTROL

7-9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Many dedicated individuals have contributed to our knowledge of disease control.	1. Review the lives of scientists who pioneered in the discovery of disease. Emphasize the unique character of the early scientists and their work.
A cause-effect relationship is evident in the cycle of most diseases.	1. Discuss and compare each of the following disease classifications: communicable, infectious, contagious, non-communicable, functional, emotional, mental, hereditary, chronic, degenerative, neoplastic, metabolic and traumatic. 2. Evaluate disease classification. Discuss its importance. 3. Discuss the ecology of an area in which a specific disease is endemic. Examine why the conditions of a particular area perpetuate a disease; e.g. schistosomiasis in Egypt, Africa, South America and the Orient. What factors in the American way of life make it practically impossible for the disease to gain a foothold in this country?
The body has a natural defense against many diseases.	1. Discuss and illustrate the antigen-antibody relationship in the body's control of disease. 2. Discuss and illustrate phagocytosis. Use slides and/or films. 3. Discuss the role of the thymus gland and lymph system in the natural control of disease.
Disease control and prevention is the responsibility of each individual.	1. Discuss how health habits are related to incidence of infections and the ability of the body to combat disease and build up immunity. 2. Relate nutrition to disease control and prevention. 3. Examine and discuss public health annual reports on diseases. Discuss possible ways to decrease incidence of some diseases. 4. Develop panel discussion on why individuals do not always avail themselves of known preventative measures in disease control. Cite smoking, coal mining and other examples.
The scope of disease control is both national and international.	1. Divide the class into groups; have each group choose one disease that is known on a local, national and international level. Have the groups then research and report on what efforts are being made in prevention and control of this disease on a local, national and international level. 2. Conduct a panel discussion on the role of education in disease control.
	Cancer
Man's records of cancer date back to antiquity.	1. Research and report on early evidence of cancer obtained from Egyptian tombs, early works of art, records of Hippocrates, Hindu art and literature. 2. Research, report and discuss the contributions of Percival Pott, Wilhelm Roentgen, Madame Curie and Rudolph Virchow.
An erratic process of cell division can result in cancer.	1. Use slides, models and drawings to show normal mitotic divisions. Show what can happen when such divisions become erratic.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Discuss the various types of cancerous growths, carcinoma, sarcoma, melanoma, leukemia and neuroblastoma. 3. Compare and discuss benign and malignant growths.
Cancer is a major health problem in this country.	1. Discuss the possible reasons for the increase and/or decrease of certain types of cancer through improved and accurate means of diagnosis, longer life span, and public awareness. 2. Discuss and study the incidence of cancer by site, sex and age. Compare with other diseases.
Certain health habits lead to precancerous cellular changes.	1. Research and report on physical, chemical and biological carcinogens: (solar radiation, x-rays and radium, atomic bombs, ultrasonic vibrations, cosmic rays, coal tars, synthetic hydrocarbons, aniline dyes, petroleum products, atmospheric pollution, cigarette smoke, and certain virus strains). 2. Invite a representative of industry to speak to the class concerning precautions taken to protect workers from carcinogens.
Early detection and proper treatment are tantamount to a possible cure for cancer.	1. Have students construct posters showing cancer's seven warning signals. 2. Develop and discuss graphs illustrating the additional number of lives that can be saved through early detection, diagnosis and treatment. 3. Evaluate the importance of having regular annual medical examinations.
The government and private organizations work toward a common goal: the eradication of cancer.	1. Role play or have panel discussions on the work done by the following toward the eradication of cancer: (include effectiveness of work) a) television, radio, magazines and newspapers b) educational institutions c) research and other medical groups d) professional and voluntary health agencies e) governmental agencies
	Respiratory Diseases
Respiratory diseases have plagued man through the ages.	1. Investigate primitive art for evidence of respiratory diseases. 2. Look for evidence of respiratory diseases in ancient literature. 3. Study the lives of Vesalius, Malpighi and Koch.
Respiration is an essential function of all living things.	1. Review the respiratory system. 2. Demonstrate the function of lungs by using animal lungs. Inflate lungs with air hose. Relate lung capacity and elasticity to health. 3. Discuss the effects of exercise on lung capacity and vitality.
The general condition of the respiratory system may be affected by early detection and disease control measures.	1. Discuss the danger of ignoring signs and symptoms of respiratory illness; include possible preventative measures in the discussion. 2. Invite a doctor, medical technician or other expert to discuss current research efforts in this area.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Develop groups to examine and evaluate the effectiveness of cold remedies through knowledge gained in interviews with pharmacists, doctors or other medical personnel and/or through reading magazines and journal articles.
Cigarette smoking is reported to have an effect on the respiratory system.	1. See unit on smoking for suggested pupil activities.
Control of respiratory diseases is the responsibility of each individual.	1. Develop a panel discussion on what each individual's responsibility is in the control of respiratory disease as related to himself, his peers, his family and community. 2. Invite a knowledgable individual to speak to the class about international problems concerning respiratory diseases.
	Circulatory Diseases
Man has not always understood the functioning of the cardiovascular system.	1. Review the circulatory system, structure and function. 2. Investigate reported fallacies associated with the working of the cardiovascular system such as arteries carry air, veins carry blood, liver as a source of all blood and other misconceptions. 3. Examine how the work of such men as William Harvey contributed to greater accuracy in understanding the cardiovascular system.
The heart is a well-designed efficient pump.	1. Secure an animal heart from a biological supply house or local butcher shop. Have students examine: a) size in relation to size of animal b) blood vessels leading to and coming from heart c) relative size of chambers d) valve arrangement e) location of the chorda tendinea f) thickness of chamber walls; note variations 2. Compare the circulatory system of humans with that of lower forms of life. 3. Provide heart model for student examination and study. 4. Encourage students to construct a heart model as a special project.
Cigarette smoking is reported to have a detrimental effect on the functioning of the cardiovascular system.	1. Study the statistical evidence which links smoking to heart disease and other circulatory diseases. 2. Discuss the specific effects of constituents of tobacco smoke on rate of heart beat, elasticity of blood vessels, etc.
Local, state, and national groups are organized to study and eliminate cardiovascular disease.	1. Investigate and report on the activities of local, state and national agencies concerned with research and treatment of cardiovascular diseases. 2. Invite representatives of such agencies to speak with the class.

DISEASE CONTROL

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Disease is an interrelationship between man and many varied and complex forces.	1. Divide class into committees and have each select one disease or group of diseases such as arthritis, venereal diseases, neuro-muscular and insect-borne diseases. Report on the history, cause, source, mode of transmission, incubation period, period of communicability, period of involvement, remissions, care, control, prevention and research.
Society has a responsibility to protect children from disease and to educate all persons about disease.	1. Invite a pediatrician to discuss the need for immunization - why immunizations are not given to children before three months of age and why "booster" shots are given. 2. Invite a well-baby clinic staff member to discuss its philosophy and effectiveness. 3. Evaluate local and state health standards and/or requirements.
Medical science is constantly improving diagnostic techniques and cures for disease.	1. Select and research a current medical treatment, surgical technique, or medicine. Report to class. Form committees for greater group interaction. 2. Evaluate "self-cure" techniques in such areas as diabetics, allergies, epilepsy, etc.
The health of a community, state or nation is everyone's responsibility.	1. Investigate the incidence of diseases in foreign countries. Relate the disease to the availability of preventive and remedial methods and to the productivity of the countries involved. 2. Interview local officials on the community's health problems and their solution. Report to class. 3. Examine and evaluate the health problems and community resources available to aid people of the community. Develop suggestions for improvement.
	Cancer
The field of medicine has been engaged in cancer research for over two centuries.	1. Have committees research and report on: a) Dr. John Hunter (18th century): first cancer society b) Dr. Pott-cancer in chimney sweeps c) Rudolph Virchow (19th century) d) William Roentgen (19th century) e) Marie Curie (19th century) f) Dr. George Papanicolaou
There are different types of disorderly cell growths.	1. Arrange for a doctor to discuss types of cancer (carcinomas, sarcomas) and their prevention. Present slides or a film showing tissue already invaded by cancer cells and x-rays of cancerous growths.
There are many possible causes of cancer.	1. Develop committees to research the various areas of medical research concerned with finding causes of cancer. (see junior high unit for possible physical and chemical causes, viruses, heredity, aging, constant irritation, customs, habits, occupational exposure to carcinogens, etc.)

DISEASE CONTROL

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
All tissue is vulnerable to cancerous growths.	1. Discuss the methods by which cancer spreads throughout the body. Show slides of healthy and cancerous tissue. Stress the importance of self-examination and early detection. 2. Develop mixed panel to report on the possible and/or most probable cancer sites in males and females.
Medical science has made great strides toward improving diagnosis and treatment of cancer.	1. Arrange for a physician to explain available diagnostic techniques used in the detection of cancer such as biopsy, smears, proctosigmoidoscopic examinations and chest x-ray. 2. Investigate the possibility of visiting a cancer clinic actively engaged in cancer treatment to discuss approved methods of cancer treatment such as chemotherapy, radiation and surgery. 3. Discuss the use of unapproved drugs, unethical treatments and quackery with cancer victims. Examine what makes it possible for this problem to persist? 4. Organize committees to report on possible breakthroughs in cancer research in the area of diagnosis, treatment and cure.
Many private and governmental agencies work toward the eradication of cancer.	1. Review the services available from the American Cancer Society, State Department of Health and others. 2. Discuss services available to cancer patients from governmental and private agencies.
	Respiratory Diseases
Varied and complex factors interrelate in the transmission and development of respiratory diseases.	1. Form committees to research and report to the class on the causes, source and/or mode of transmission, incubation period, communicability, susceptibility, resistance, preventative and/or control methods, care and current research on the following diseases which affect the respiratory system. a) colds b) tuberculosis c) emphysema d) asthma e) bronchitis f) hay fever g) lung cancer h) cystic fibrosis i) influenza j) pleurisy k) pneumonia l) any others
Respiratory diseases can be largely controlled through good health habits and proper individual decisions.	1. Discuss the possible decisions high school students can make that may affect the health of their respiratory system.
Community action is required if respiratory problems are to be prevented and/or eliminated.	1. Have the class create a situation in which a group of citizens concerned about community situations, related to respiratory diseases, approaches the local government in an attempt to remedy the situations. Demonstrate through role playing the problems which exist and their possible sclutions. (Refer to Community Health Unit for further information.)

DISEASE CONTROL

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Relate community action to the changes that have occurred in mortality and morbidity due to respiratory disease. An example: air pollution through thermal inversion.
	Circulatory Diseases
Cordiovascular disease is a major physical and psychological health problem.	1. Discuss changes that occur in family patterns when any member of the family suffers from a cardiovascular disease. 2. Chart and study types of cardiovascular disease, the possible contributing causative factors, the average age of onset, and the prevention and treatment.
Medical research is in constant search of solving cardiovascular problems.	1. Investigate current research on artificial valves, heart-lung machine, pacemakers, electro-cardiograms, cholesterol research, transplants and physical and emotional stress. Form committees for reporting findings to the class. 2. Discuss the work of medical research teams who studied citizens of Roseto, Pa. Cardiovascular disease is practically non-existent among the overweight citizens of this town.
Personal health habits affect the functioning of the cardiovascular system.	1. Research and discuss the effects of each of the following on the cardiovascular system: a) smoking b) alcohol c) diet rich in saturated lipids and cholesterol d) stress (through exercise) e) stress (other than through exercise) f) exercise; consistent and sporadic
The incidence of cardiovascular disease varies from one country to another.	1. Relate the structure of American society to that of a less complex society to the incidence of cardiovascular disease. 2. Examine and evaluate the possible reasons for the dramatic increase in cardiovascular disease in the Orient since World War II.
Many agencies assist in the prevention and control of cardiovascular diseases.	1. Invite a representative of the Heart Association to speak to class about the work of that association. 2. Visit cardiovascular research facilities sponsored by Heart Association if available. 3. Suggest to students that they volunteer some time to help in the work of the Heart Association or associations with similar goals.

DISEASE CONTROL

GRADE 13

Disease results whenever there is an uncompensated increase in those factors which promote disease or a decrease in those factors which retard disease.	1. Discuss the antibody-antigen relationship. 2. Review current theories on natural and acquired immunity, resistance, etc.

DISEASE CONTROL

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Heredity and environment may serve to aid or retard the development of disease.	1. Discuss sickle-cell anemia as a hereditary disease and as a disease-retarding factor inhibiting the development of malaria. 2. Relate disequilibrium in environment to disease—excessive fluorine in drinking water; pollutents in air or water, etc. 3. Have students research and report on customs and mores that contribute to the establishment of specific diseases.
Diseases may be classified in various terms which characterize their course.	1. Determine the factors which constitute: chronic disease, acute disease, occupational disease, functional disease, organic disease, communicable disease.
Certain salient factors are important in the control and prevention of communicable diseases.	1. Divide the class into groups; have each group research and report on one of the following: a) causative agents of disease and its nature b) reservoirs of disease (zoonosis); significance of other vertebrates in transmitting disease to man. c) exit of causative agent from body (nose and throat, fecal and urinary discharge, blood transfer, suppuration) 2. Research the various ways and means of transfer of disease such as direct and indirect contact or vectors,and suggest methods of blocking routes of transmission.
Most communicable diseases follow a characteristic pattern of development.	1. Discuss the significance of each of the following typical periods of a communicable disease and incubation period, prodromal period, fastigium, defervescence and convalescence period. a) During which stage does the body react to the organism? b) When can the disease be diagnosed? c) During which period can a relapse occur?
Individual countries can no longer act with complete independence in the control and prevention of disease. Programs need to be developed on an international scale.	1. Research which diseases afflict the most people on a world-wide scale (malaria, schistosomiasis, etc.) Determine the incidence of these diseases in America. How does modern transportation affect the epidemiology of a disease? 2. Investigate what is being done in the developing countries to establish health services and health education programs. 3. Research the effectiveness of such agencies as the World Health Organization, United Nations Children's Fund, Food and Agriculture Organization and the United Nations Educational , Scientific and Cultural Organization.
	Cancer
Cancer is a disease characterized by the uncontrolled growth of cells.	1. Have students do a comparative study of prepared slides showing normal mitotic divisions and tissue containing cancer cells. 2. Arrange to borrow preserved cancerous tissue from the pathology department of a local hospital. Study the visible effects of the cancerous growth on the surrounding tissue. If possible, obtain invasive and non-invasive tumors.

DISEASE CONTROL

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Compare specimens of benign and malignant tumors.
There are many causes of cancer.	1. Research the literature reporting cancer research with lower animals. What evidence is presented to link a specific carcinogen in a lower form to cancer in man. 2. Examine the incidence of specific diagnosed cancer as related to exposure to carcinogens.
Through early diagnosis of some cancers it may be possible to completely cure or prolong health and longevity.	1. Review the literature of the American Cancer Society reporting the meetings of the Cured Cancer Society. Note references to the importance of early diagnosis. 2. Through committee work carefully examine the following: a) the incidence of cancer in this country b) the incidence of early detection c) the kinds of cancer d) the present percentage of cure for each kind e) the possible percentage of cure for each kind f) the mortality ratio for each kind in recent years g) lives lost which could have been saved through earlier detection h) cancer incidence by sex i) mortality ratio by sex
	Respiratory Diseases
The main function of the respiratory system is to ventilate the blood.	1. Review anatomy and psysiology of respiratory system; include a review of the pulmonary circulation. Emphasize the interdependence of these systems to gain greater knowledge of their functions.
Respiratory diseases are classified according to causitive agents.	1. Construct a list of several respiratory diseases. After research on each disease, have them classify the disease, as being of bacterial origin, viral origin, functional, organic, physical or chemical irritation, etc. (Refer to unit on Community Health and/or Smoking for information of lung involvement in smoking, air pollution, etc.)
The respiratory system is assisted by an individual's ability to make decisions conducive to his good health.	1. Develop a panel discussion on the relationship between an individual's decision whether or not to use tobacco, drugs or other potentially harmful substances and the health of the respiratory system. 2. Discuss the work of agencies whose efforts help us to make wise decisions concerning the health of the respiratory system.
	Circulatory Diseases
The circulatory system comprises several sub-systems of circulation.	1. Review: the pulmonary, the renal, the portal and the coronary circulation. 2. Observe preserved specimens of heart, arteries, veins. Study prepared slides of capillaries.

DISEASE CONTROL

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Modern diagnostic techniques make possible the early detection of cardiovascular defects.	1. Form committees to research and report on the following graphic methods of cardiac examination: a) roentgenologic techniques (fluoroscopy angiocardiography) b) electrocardiography c) vectocardiography d) phonocardiography (including ultrasonic cardiography) e) cardiac catherization
Modern surgical techniques have significantly improved the chances of recovery of cardiovascular disease victims.	1. Invite a heart surgeon to speak to class about innovations in heart and vascular system surgery. 2. Discuss the effectiveness of these innovations in terms of patient recovery, comparative mortality rates, patients' ability to lead a relatively normal life after surgery, etc.
The cardiovascular system is subject to a number of specific diseases.	1. Investigate and discuss such cardiovascular diseases as arteriosclerosis, endocarditis, coronary occlusion, rheumatic heart disease, apoplexy, etc. Classify as organic, functional, infectious, congenital. 2. Examine the effects of syphilis, diptheria, tuberculosis, typhoid fever, on the cardiovascular system. 3. Identify the factors that may lead to hypertension. Discuss the role of heredity in the tendency toward hypertension.

DISEASE CONTROL

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Cancer Society, Pennsylvania Division, 3309 Spring Street, Harrisburg, Pennsylvania 17110
2. Jones, Kenneth L.; Louis W. Shainberg; Curtis O. Byer; *Health Science* (New York: Harper and Row Publishers, 1968).
3. Pennsylvania Heart Association, 2743 North Front Street, Harrisburg, Pennsylvania 17110
4. Pennsylvania Tuberculosis and Respiratory Disease Society, 311 South Juniper Street, Room 1000, Philadelphia, Pennsylvania 19107
5. U. S. Surgeon General Advisory Committee, *Smoking and Health,* U. S. Department of Health, Education and Welfare, Bulletin No. 1103, Washington, D. C., 1964.

DRUGS AND NARCOTICS

Rationale for Unit:

Drug education has as its objective, regardless of the level of instruction, the prevention of drug abuse. Because it is a preventive measure, it will compete with the factors which give rise to problems with drugs. These problems include the increase in new drugs, the increase in tension and anxiety which causes individuals to seek relief through drug abuse, and the loss of identity through drug abuse.

To achieve this objective, it is imperative that those who use this guide present to the students accurate information. The importance of this is indicated by drug abusers themselves who state that prior information about drug abuse might have prevented their involvement — particularly where curiosity or thrill-seeking was the apparent motivating factor in their introduction to drugs.

At one time, drug education was concerned only with the narcotic problem and resulting addiction. Today, drug addiction encompasses an appreciation of the medical properties of drugs as well as the problems of drug abuse and misuse. This unit considers all drugs from the common aspirin to the latest hallucinogens, the contribution of drugs to man's well-being, the desirable side effects of some valuable drugs and useful solvents, and the danger inherent in *all* drugs.

Critical evaluation of what is read relating to drugs, should be a part of each student's education, since students will read sensational articles within the classroom and outside of it. The teacher should not shy away from this fact; rather, it is an opportunity to teach students to analyze what they are reading.

Many students can be dissuaded from drug experimentation if they are approached on the subject in a forthright way—an approach which will enable them to grasp the implications of abuse by young people.

Basic Concept:

Through accurate knowledge of drugs and narcotics, their benefits and liabilities, drug abuse shall be avoided.

Suggested Pupil Outcomes:

1. Demonstrate an ability to distinguish between drugs, narcotics and common household chemicals which have appropriate uses, yet are potentially dangerous when used improperly.
2. Identify, list and compare the variety of narcotics and dangerous drugs.
3. Compare and contrast the effects of stimulants and sedative drugs on the body and its function.
4. Demonstrate a knowledge that medically prescribed drugs and volatile substances can and will contribute to long-range good health for mankind.
5. Discover and interpret the factors which contribute to drug use and/or abuse.
6. Demonstrate a knowledge of the laws governing drugs and narcotics. Evaluate their application to contemporary society.
7. Demonstrate an understanding of the functions and responsibilities of the Federal Bureau of Narcotics.

DRUGS AND NARCOTICS

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Medicines designed to cure and prevent sickness can be dangerous when improperly used.	1. Have students relate their experiences with taking medicine. Why is it necessary to take a specific amount at a particular time? 2. Discuss why a doctor's prescription is necessary to obtain certain types of drugs. 3. Invite a druggist to visit the class. Suggest that he discuss the safety factors associated with medicine as well as possible harm from misuse. 4. Demonstrate various poison labels so that children will learn to identify them. 5. Collect newspaper and magazine articles dealing with accidental poisonings, safe use of medicines, etc. Make scrapbooks or arrange articles as a bulletin board exhibit using the materials collected.
Physical hazards are posed by abuse of non-medical substances found in the home and garage.	1. Read warnings from labels on empty paint cans, cleaning fluids, glue tubes and household cleaners. Explain meaning to students. Solicit discussion. 2. Discuss the effects caused by the abuse of these substances on general health. 3. Demonstrate what should be done if, by mistake, any of these substances is ingested. 4. Have students discuss safety factors concerning these substances with parents and older brothers and sisters. Provide opportunities for the conversation at home to be further discussed in school.

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Under certain circumstances, following the crowd can be dangerous.	1. Discuss how great harm can result from "taking a dare" involving the use of unknown substances, candy from strangers, etc. 2. Dramatize a situation in which a student is urged, by his friends to take a dare. Discuss the consequences. 3. Have students write essays on the value and correct use of volatile materials and medicines when properly or improperly used, and the dangers of these substances.
Decisions made early in life frequently effect our future.	1. Examine the physical and psychological effects of drugs and volatile substances improperly used. Emphasize the immediate and long range effects. 2. Discuss the effect of drug abuse on one's future.
The public is protected against medicines and products that might harm the individual.	1. Invite a local druggist to discuss the proper use of prescribed and patented medicines. Include the purposes of records and laws governing medicines. 2. Develop a display of container labels. Illustrate that they show the proper use of the products. 3. Briefly examine the purposes and activities of the Food and Drug Administration.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Stimulants and depressants are present in many "common beverages"	1. List and discuss the effects of common beverages such as tea, cola drinks and coffee. Briefly introduce or review the effects of alcohol and cigarettes on the body. 2. Refer to units on Alcohol and Smoking.
Regular practice and use of stimulants and depressants often leads to stronger drugs.	1. Discuss the habit forming effects of repetitive use of sleeping pills tranquilizers, diet pills and other stimulants. 2. Discuss experimentation with drugs as the first step to regular use. 3. Show an appropriate film illustrating drug abuse. 4. List and discuss the five categories of drugs: narcotics, sedatives, tranquilizers, stimulants and hallucinogens.

DRUGS AND NARCOTICS

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Drugs have always been useful and valuable to man.	1. Examine drug remedies and superstitions. Discuss and evaluate these beliefs. 2. Investigate the current uses and dangers of various types of drugs, narcotics, patent medicines, anesthetics, antibiotics, hormones, tranquilizers, antihistamines, amphetamines, barbiturates, antiseptics and hallucinogens. Form committees and report findings to class.
The increase in longevity of man is partly due to modern drugs.	1. Research and prepare graphs illustrating the life expectancy in the United States and other countries. 2. Trace through medical history the development of drugs in the treatment of diseases such as diptheria, typhoid, tuberculosis, polio, epilepsy, diabetes and others.
Drugs affect individuals in different ways.	1. Discuss the dangers and hazards involved in overdoses and the combining and sharing of drugs. 2. Discuss possible reactions and what to do for those who react to drugs, such as allergenic reactions, tachycardia, and depression.
Experimentation with drugs can lead to uncontrollable use of drugs.	1. Discuss the various reasons why young people will try body and mind altering substances. 2. Show an appropriate film on drug addiction.
There are inherent dangers in the indiscriminate use of any drug.	1. Have the students report and discuss the psychological and physiological effects of marijuana, pep pills, tranquilizers, anti-acids, laxatives, aspirin and others. 2. Create a situation requiring a decision to try for the first time a form of drug or narcotic. Present to the class for open discussion or role play.
The prolonged use of drugs, which may or may not lead to drug dependence, often leads to other individual health problems.	1. Investigate the health conditions related to the use of drugs, such as venereal disease, pest infested living quarters, respiratory illnesses, skin infections, malnutrition and intestinal diseases.
Maintaining a drug habit is expensive and often leads to crime.	1. Examine the cost in dollars, job efficiency and safety of drug abuse. Report on the cost to the individual addict, loss of merchandise

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	through stealing to support a habit, cost to society in treatment and rehabilitation centers and the cost in terms of wasted human potential. 2. Investigate the interrelatedness of drug use to incidences of crime. 3. Discuss the extent to which drug addiction has become a problem in the state and local communities.

Years of research, testing and continuing quality control are needed before certain drugs may be used by the general public.	1. Have students research and report on the development of drugs such as thalidomide, krebiozen, Salk and Sabin vaccines and L.S.D. 2. Have students develop a bulletin board showing the steps or progression required by the Food and Drug Administration for acceptance of new drugs.
There are many beneficial values of properly used drugs.	1. Investigate and report individually or in small groups, on current research of professional organizations concerned with the beneficial effects of anesthetics, antibiotics, tranquilizers, amphetamines, barbiturates, antiseptics, narcotics, hormones, antihistamines, hallucinogens and others.
Pharmacology plays an important role in drug abuse.	1. Invite a local pharmacist, doctor, or pharmaceutical representative to discuss the effects of drugs on the physiology of the body. 2. Invite a local policeman to discuss law enforcement and drug abuse. Relate to private citizens practicing self medication. 3. Investigate the accelerated side effects of combining drugs with alcohol and other drugs.
To receive the maximum beneficial effects from drugs it is necessary to use them as medically directed.	1. Discuss the statement: take double the prescribed dosage and get well twice as fast. 2. Invite a local pharmacist or doctor to discuss overdosage and how it may lead to habituation, addiction and death. Examine other effects such as hallucinations, disequilibrium, dizzyness, nausea, stupor and organ tissue damage.
The pathway leading to drug abuse varies.	1. Investigate and report individually or in small groups the social, emotional, economic and cultural background which frequently influences drug use and abuse.
Drug abuse causes problems for the individual and society.	1. Discuss the social effects of drug abuse on delinquent behavior, social dropout, loss of job, accidental poisoning, motor vehicle accidents and family life. 2. Discuss and report on the development of narcotic addiction in newborn children. 3. Discuss the emergence of new thought regarding drug addiction as an illness as opposed to criminal activity.
The treatment of persons using or addicted to drugs is difficult and complex.	1. Have students investigate the many approaches taken to treat drug abuse. Examine methods used in the United States such as imprisonment, hospitalization (with medical and psychological

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	services), institutional counseling, community surveillance, case-work, and mutual aid organizations for ex-addicts. 2. Investigate the treatment programs at Federal rehabilitation centers.
Control of drug abuse is difficult.	1. Investigate and discuss the three federal narcotic statutes and the medicinal narcotic classification system. 2. Review and discuss the Pennsylvania Drug, Device and Cosmetic Act. 3. Chart the distribution points for drugs from manufacturer to user. Discuss how drugs arrive on the illegal market. 4. Invite an appropriate official to discuss current state, national and international controls of drug use.

DRUGS AND NARCOTICS

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Federal, state and local governments play a significant role in drug production, drug traffic and drug use.	1. Do research and report on governmental control of drug production, drug traffic and drug use. 2. Invite a representative of law enforcement to interpret the laws governing drug use. 3. Debate: "Does the government have the right to control drug use by the private citizen?" 4. Research, report and discuss the methods of working with addicts as practiced by the Federal Government, the Maryland Program, the California Program, Narcotics Anonymous, Synanon, Daytop Lodge, Methadone Program, Halfway House, Teen Challenge and others. 5. Debate: The "English" System of addict rehabilitation versus methods used in the United States.
The factors leading to drug addiction are varied and complex.	1. Study personal accounts of the lives of addicts. Look for behavior patterns that are common to all. Determine unique behavior patterns. 2. Analyze behavior patterns that may lead to drug use and addiction. 3. Invite a psychiatrist to discuss some of his experiences with addicts. 4. Present a film on drug addiction showing addicts discussing their involvement and start in drug use.
Drug use has a detrimental effect on the economy of the nation.	1. Research and report on the narcotics traffic from the origin to the user. Emphasize the financial aspects of narcotics traffic. 2. Research the man-hours lost, effect on the gross national product and individual losses due to illegal drug use. 3. Examine the role of the underworld in illegal drug traffic. 4. Investigate the involvement of drug users in acts of crime.
The dangers of drug abuse extend beyond both the psychological and physiological limits of man.	1. Demonstrate the fact that direct or indirect drug abuse can become an important factor in one's acceptance or rejection by medical schools, law schools, graduate schools, government agencies, private industry and general employment.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Contact personnel departments of various agencies and institutions for information on their point of view concerning drug users

DRUGS AND NARCOTICS

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Association for Health, Physical Education and Recreation, 1201 16th Street, N.W., Washington, D. C. 20036
2. Food and Drug Administration, U. S. Department of Health, Education and Welfare, Washington, D. C. 20201
3. Jones, Kenneth L.; Louis W. Shainberg; Curtis O. Byer; *Health Science*, (New York: Harper and Row Publishers, 1968).
4. Levy, Marvin R., Editor *Drug Abuse*: A Reference For Teachers (Trenton: New Jersey State Department of Education, Division of Curriculum and Instruction, 1967).
5. Pennsylvania Department of Health, *Teachers' Resource Guide on Drug Abuse*, Harrisburg: The Department; Division of Public Health Education, 1968. (An extensive annotated bibliography of books, booklets, periodicals, and pamphlets is available in this publication.)

FAMILY RELATIONSHIPS

Rationale for Unit:

This unit provides opportunities for students to explore both the changing role of the family in present-day America as well as the functions of the family. These functions are essential to the survival of the individuals who make it up and of the society of which it is a part. Generally, these functions include the satisfaction of personal drives and desires, perpetuation of man, transmission of the culture and personality development of children.

Particular emphasis is placed on the family as the basic unit of our society in providing for an individual's mental, physical, and social health needs. A frame of reference is provided as to the importance of the family in our culture, the relationship of the family members to each other and the reciprocal importance of families and individuals to each other. Through these learnings, the students should be given opportunities to develop attitudes, knowledge and skills which will enable them to contribute effectively to their present and future family life.

This unit correlates well with the following units: Human Sexuality, Community Health, and Heredity and Environment.

Basic Concept:

The family is the basic social institution imbued with the responsibility for providing its members with experiences which they need for maximum physical, mental, social, emotional, and spiritual development.

Suggested Pupil Outcomes:

1. Demonstrate an understanding of the significance of the family unit in present-day America.
2. Compare and contrast the attitudes related to the roles and responsibilities of family members.
3. Examine and evaluate the interrelationships of the individual, the family and cultural or environmental influences.
4. Compare and interpret how the roles of the family may change as society changes.
5. Discover and analyze the responsibilities which each family member accepts in building a happy and effective family life.

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CONCEPTS	SUGGESTED PUPIL ACTIVITIES
Each of us is a member of a family.	1. Develop family awareness by having students color, cut out or paste family member figures in a scrapbook. 2. Discuss with children the many different family structures we live in. 3. Discuss some of the differences there are in families, such as size and types of members.
Sharing helps to make home a happy place.	1. Help the children to compile a list of things at home which belong exclusively to them and another list of things which belong to everyone in the family. Discuss the relationship between the two lists. 2. Encourage the pupils to role play, showing ways in which the family members may share with one another. 3. Ask the children to tell about their household responsibilities and how they contribute to family tasks.
Family unity depends on doing many things together.	1. Plan with the children picnics, birthday, holiday celebrations and vacations. Suggest that they discuss similar plans at home. 2. Discuss with the children plans involved in preparing for company. 3. Draw and display pictures by students of families doing things together. Suggest each student discuss or tell about his picture.
Each of us is a member of a *school* family as well as a *home* family.	1. Discuss the similarities and differences in the *school* and *home* family. 2. Discuss ways in which we can make living together in the classroom safer, more comfortable, friendlier and healthier. Compare with family living. 3. Make a chart on which you show how much student time is spent with the school family. Compare this with home family. 4. Draw pictures and/or discuss how the nurse, teacher and school patrol contribute to the school family. 5. Discuss how children can help a new student feel at home.
Children make important contributions to the family.	1. Make a surprise gift for the parents or the home. Suggest project to the art teacher. 2. List with the children the home duties that young children may be able to assist with or assume. 3. Discuss ways children can help the teacher and other children without having some specific job assigned to them. 4. Discuss what may happen when duties are not carried out.
There are similarities and differences in family life in other countries.	1. Read about and discuss the ways in which family life is different in foreign countries. Have the class discuss personal experiences. 2. Invite exchange students (if available) to discuss family life in their country.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Develop a bulletin board display of people of other countries emphasizing differences in clothes, customs, games and sports. 4. Ask students to bring in various cultural articles and objects of different nations. 5. Taste foods and play games appropriate to other countries.
The home and school contribute to the perpetuation of our culture.	1. Investigate the history and heritage of your community. 2. Discuss with students our culture as compared with that of other countries. 3. Suggest children ask grandparents to tell about their childhood experiences relating to the family.
The family should foster the fullest development of each individual in the family.	1. Have a talent or hobby show at school. Encourage the children's musical and artistic abilities. 2. Watch for special aptitudes and skills which can be developed and channeled into constructive use. 3. Initiate creative activities in class to explore individual potential and family interests.

FAMILY RELATIONSHIPS

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Family unity and pride develops through individual contribution and interaction.	1. Encourage children to participate in home activities. Establish ways in which each child can take part. Solicit cooperation of the home. 2. Provide an opportunity for the pupils to discuss highlights in family life: honors won by family members, and anniversaries or birthdays celebrated at home.
Family problems can be solved, when all family members work as a unit.	1. Develop ideas as to how a family can adjust to changes in the family pattern such as: the arrival of a new baby, illness, or working mother. 2. Discuss the effect which the death of a family pet may create.
Family patterns differ.	1. Discuss family patterns in other countries and contrast them with America. 2. Make drawings showing the difference between family patterns in earlier times compared with present day.
The independent nature of family life requires that each member develop a sense of responsibility.	1. Share true experiences of home tasks. 2. Prepare a chart evaluating these home responsibilities. 3. Set up with the group a good housekeeping code and a schedule of duties in the classroom.
We feel more secure within the family when we make decisions and accept the consequences.	1. Ask the students to tell of some personal experiences in which the consequences of making right and wrong decisions were recognized. 2. Plan a debate on "Parent Selection of Television Programs" vs. "Children's Selection of Television Programs."

FAMILY RELATIONSHIPS

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Changes that occur in daily living affect family life.	1. Discuss the natural changes that occur in everyone's life. Some examples are new members, deaths, moving, illness, divorce, remarriages and loss or change of jobs. 2. List things that parents may do which show love; list what students do for other family members at various times to show they love them (e. g., during illness, daily, on special days).
The family should foster the fullest development of each individual in the family.	1. Discuss how the talents of each family member contributes to the family structure. 2. Examine qualities admired in other people. 3. Arrange a bulletin board with pictures of people expressing different moods. Discuss and explain how moods can change and why.
Leisure time activities affect the development of wholesome family morale.	1. Teach the children games that can be played while traveling, on rainy days and on special occasions. 2. Make a list of activities for a child to entertain himself at home. 3. Plan with the class an indoor field day. 4. Encourage the creative use of various materials such as old Christmas cards, drinking straws, colored paper and cloth. Plan in cooperation with the art teacher. 5. Plan puppet plays about family life.
The moral and spiritual values prevailing in the family group help to shape family relationships.	1. Encourage the class to prepare a seasonal basket for a family in need. 2. Provide opportunities to cooperate with local organizations in their benevolent programs. 3. Arrange for voluntary participation in a community project, e.g. paper collection, playground clean-up, etc.

FAMILY RELATIONSHIPS

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Family life activities change according to environment, age of children, and societal conditions.	1. Many factors such as industrialization, urban development and suburban expansion have brought about changing family patterns. Discuss these changes with the class and encourage their evaluations of change. 2. Conduct class discussions on the difference between home obligations of urban and rural youth. Draw upon the experiences of the class members.
The school and home are responsible for the health of its family members.	1. Have students develop their own health history record. 2. Have students pantomine accidents that frequently happen in homes. Suggest preventive measures. 3. Invite a member of the rescue squad, a school nurse or a fireman to speak to the students. Have equipment displayed and demonstrated. 4. Develop small groups to discuss ways in which the home and

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	school must cooperate in efforts toward the total health of each member of its family group.
As family members grow and mature their responsibilities change.	1. Prepare reports on the responsibilities of different members of the family. Involve economics, discipline and chores. 2. Develop a bulletin board identifying a teenager's responsibilities in the home. Utilize to stimulate class discussion. 3. Analyze with students their own changing roles in the family group as they get older and mature. 4. Involve the students in role playing situations of how adolescents can earn privileges, respect and independence through the demonstration of self-control, responsibility, pride, throughfulness and dependability. 5. Discuss the process of maturation and how one develops responsibility. Examine the question: Are we always subject to answer to someone for our actions?
An individual's role and functions change with his position in the life cycle.	1. Set up committees to study roles of individuals at the various steps of the life cycle. Report and stimulate a class or panel discussion.
An individual's personality and social development is primarily influenced by the family.	1. Discuss acquired habits, idiosyncrasies, hobbies, attitudes and diet as family traits.
Social problems of youth may be directly related to the home.	1. Develop a panel discussion to examine relationships of the family unit to specific conditions such as deliquency, misuse of alcohol and drugs, smoking, emotional maladjustment and sexual experimentation outside marriage.
The social custom of dating affords boys and girls the opportunity to begin to understand each other as well as one's self.	1. In discussion groups, formulate lists of likes and dislikes of the opposite sex. Compile lists into one for boys and one for girls. Discuss the final lists. 2. In mixed groups, discuss the influence of social pressures on determining dating patterns. Discuss the parents role in determining when the individual starts dating, curfew hours and places to go. 3. Set up committees to discuss and plan dating activities within a set budget and certain time limitations.
Family living experiences should present opportunities for all members to develop into mature, responsible adults.	1. Appoint a committee to prepare a shelf of interesting reference material on "Discovering Yourself." Assign this material to be reviewed, discussed and evaluated. 2. Have a discussion session in which students list their weaknesses and strengths. Suggest each student list those traits he would like to develop further. 3. Cite examples of people who have exhibited a sense of responsibility by taking a stand on some controversial issue. 4. Have each student list instances when he stood alone for or against a particular issue. Discuss the feelings each experienced. 5. Introduce and discuss rules of etiquette for different types of social situations.

FAMILY RELATIONSHIPS

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	6. Use class incidents to illustrate the importance of consideration for others.

FAMILY RELATIONSHIPS

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The status of the family in our society is one of change and mobility.	1. Discuss the effects or urbanization, growth of suburbs, technology and occupational transientness on family living. 2. Discuss the changing attitudes of the family toward the care of the elderly, material things and recreation.
The success of the family as a social institution is the responsibility of the individual.	1. Have the class contrast the functions of the family in our country with those of other countries. 2. Discuss the responsibility of parents in respect to family health, economics, recreation and moral and spiritual influence.
The family is the most influential force on the behavior, attitudes and personality of individual members.	1. Investigate and discuss how the family influences attitudes toward respect of property, law, education, politics, religion and sexuality. 2. Discuss or debate various family techniques or measures of discipline and how they relate to the individual's lack of self-restraint or his control of behavior.
Family patterns and current social problems are many times interrelated.	1. Invite a social or welfare worker to discuss how families can help prevent divorce, crime, emotional illness and alcoholism. 2. Investigate and research for discussion the incidence of venereal disease, illegitimacy and early marriage in relation to the family.
Family social and economic status, standards, attitudes and cultural values influence the selection of marriage partners.	1. Research and report on current marriage customs in contrast to customs practiced in other countries. 2. Discuss the success and failure of inter-faith and inter-racial marriages involving expected and probable obstacles which may be encountered. 3. Research and discuss the social, economic and educational factors which may influence the selection of a marriage partner.
One's formative environment and experiences contribute strongly to the character and values he brings to marriage.	1. Discuss what attitudes and values are, how they develop and what forces mold them. 2. Have the students report on their concepts of dating, courtship, pinning, engagement, wedding, honeymoon, marriage and family.
The success or failure of marriages are influenced directly by various factors.	1. Invite a marriage counselor, minister, priest or rabbi to discuss factors which contribute to unhappy marriages and divorce, as well as ingredients of a happy, successful marriage. 2. Examine and evaluate the importance of common interests, maturity, health, goals, values and religion as a foundation for a successful marriage.

FAMILY RELATIONSHIPS

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Knowledge, comprehension deference of human reproduction, prenatal and postnatal health problems, and the birth process is a shared responsibility of parents.	1. Have the class discuss the influence of economics, religion, health, fertility and sterility upon family planning. 2. Invite the school nurse or physician to discuss prenatal and post-natal health environment of the mother. Include development of the embryo, fetus and infant. 3. Invite an obstetrician to discuss the process of childbirth and the different methods of childbirth. Include, when appropriate, the concept of birth control and the best age for parenthood from the physical, emotional and social point of view.
Family planning is a world concern.	1. Research the factors that would tend to modify the statistics published yearly concerning the national birth rate. 2. Research and report on what other countries with large populations are doing to provide for their people. 3. Discuss possible effects of family planning and increased productivity on world health.

FAMILY RELATIONSHIPS

GRADE 13

The family is a tangible link between the generations of mankind, past, present and future.	1. Conduct a discussion in which the family is treated as a group, a social entity, a cultural pattern, a legal entity, an economic arrangement, a political fact and a biological process. 2. Discuss the effect of matriarchy and patriarchy on the various cultures in which they were significant.
The family contributes to the personal needs, aspirations, desires, and drives of the individuals who make up the family.	1. Evaluate the various reasons why individuals want to raise a family. 2. Discuss marriage as the birth of a family and the normative pattern of sexual adjustment within most societies.
The family perpetuates mankind.	1. Discuss the biological facts that help to explain why the institution of the family has developed as it has (the long period of helplessness of the human infant, love, need, etc.)
The family is the process through which the way of living in a society is transmitted from generation to generation.	1. Discuss the role of the family in educating its members. 2. Discuss the subtle influence of folk-ways, customs, mores, taboos, and laws on individual conduct. How has the family influenced this? 3. Examine the role of the family in establishing prejudices and ideals?
The family contributes to the personality of the child.	1. Discuss the stages through which an infant becomes acclimated to family life. 2. Form committees to examine the contributions of the family group to the physical, psychological, spiritual, intellectual, and emotional growth of its members.
The relationships within a family constantly evolve.	1. Discuss the statement: "A family is never a static institution". 2. Examine family equilibrium in terms of needs, hopes, interests, traditions, and interpersonal relationships.

FAMILY RELATIONSHIPS

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Discuss factors that keep a family in equilibrium, e.g., identification and imitation.
The American family has established itself as a basic symbol of a democratic society.	1. Consult with the Bureau of Statistics to learn of the changes in the percentage of the American population living in families, number of persons per household, number of married couples, number with homes, etc. 2. Compare trends in age at time of marriage and family size. Compare to the national stature; war, peace and depression. Make a comparison with other countries. 3. Research with students the effect of polygamy, monogamy and group marriages on the life of nations. 4. Research and discuss the influence of asceticism on the American way of life. 5. Compare national birth rates with South American countries, India, China, Russia and others.

FAMILY RELATIONSHIPS

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Association for Health, Physical Education and Recreation, 1201 16th Street, N.W., Washington, D. C. 20036
2. American Social Health Association, 1790 Broadway, New York, New York 10019
3. Bowman, Henry A. *Marriage for Moderns.* (New York: McGraw-Hill Book Company, 1965.)
4. Mead, Margaret and Martha Wolfstein *Childhood in Contemporary Culture.* (Chicago: University of Chicago Press, 1963).
5. Planned Parenthood Federation of America, 515 Madison Avenue, New York 10022
6. Public Affairs Pamphlets, 381 Park Avenue South, New York, New York 10016
7. Science Research Associates, 259 East Erie, Chicago, Illinois 60611
8. Sex Information and Education Council of the United States, 1855 Broadway, New York, New York 10019

HEALTH CAREERS

Rationale for Unit:

One of every 30 persons employed in the United States works at maintaining the nation's health. The present need for health personnel is urgent! As our knowledge expands in the various health areas, the demand for people to supply health care will outstrip the supply for many years to come. The schools have an obligation as the critical force which can tip the balance in the direction of adequate health care for Americans through educational programs that guide and prepare students for health careers. Schools have a responsibility to be aware of and expose students to the full panoply of educational opportunities and available resources to pursue them in their regions. They should recognize there is a place for all skills. If the schools are to achieve their fullest potential, they must not be satisfied just with disseminating information to prospective students. Instead, they must be concerned with the entire process the student passes through from kindergarten into college or to a professional school, into a health career, and through continuing education.

Basic Concept:

Unlimited opportunities are available in many fields under the broad spectrum of health careers for those students who are interested in richly rewarding careers. These opportunities can lead to great satisfactions that one receives from helping others.

Suggested Pupil Outcomes:

1. Demonstrate a knowledge of the opportunities for health careers.
2. Demonstrate a knowledge of the responsibilities and training required in various health careers.
3. Compare and contrast the financial and the humanitarian rewards commensurate with a health career.
4. Identify the vast range of health careers with their many and varied skill requirements.
5. Analysis and evaluation of a health career for a personal vocation.

HEALTH CAREERS

K - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Many people working in different places contribute to the health of a community.	*The Water Plant* 1. Discuss the importance of water for good health. 2. Discuss various uses for water in relation to health and the need for its being pure. 3. Visit a water purification plant. *The Laboratory* 1. Discuss how research people are always looking for new ways to keep people healthy and how the laboratory people can help doctors. 2. Show a microscope or picture of one, and discuss how it can be of help. *The Hospital* 1. Discuss why hospitals are important. 2. Discuss how many different kinds of work people in hospitals do. 3. If any children have had experiences in hospitals, a discussion of how many different people helped them get well may be used. *Food Plants* 1. Ask the students to tell what they think happens to food before it comes to them in cans, frozen packages and fresh. 2. Discuss how certain people inspect foods to make sure they are safe for eating. 3. Ask, Who inspects meat? Have any students ever noticed the stamp on meats? Who inspects milk? Is it important? *The School* 1. Name some of the school employees that help to keep us healthy, i.e. cafeteria worker, janitor, school nurse, dental hygienist, school doctor, teacher and principal. Have students tell how these persons help us to be healthy. 2. Take the children to visit the cafeteria showing the preparation of food and how the dishes are washed and sterilized. *The Doctor* 1. Besides taking care of us when we are sick or injured, discuss how he is interested in keeping us well. (For the teacher — examples of chest x-rays, examinations, immunizations can be given.) 2. Show a stethoscope and allow children to listen through it to the heartbeat of other children. 3. Have children identify other medical specialists and tell what each does. (examples: pediatrician, dermatologist, ophthalmologist, obstetricians). Discuss how each one's field of specialization relates to the other's.

HEALTH CAREERS

K - 6

CONCEPTS

SUGGESTED PUPIL -TEACHER ACTIVITIES

The Nurse

1. Discuss with the students what they think a nurse does. Ask if a nurse has ever taken care of them.
2. Have the school nurse visit the classroom. Prepare children to ask questions of the nurse.
3. Pictures of nurses in different types of uniform can be shown. Discuss where they work.

The Dentist

1. Have children relate their experiences with the dentist.
2. Ask them if he uses special tools and equipment.
3. Stress his role in promoting good dental care as well as treatment.
4. If there is a dental hygienist in the school, have her visit and tell about the dentist's work and also her role in assisting him.

The Pharmacist

1. Discuss the pharmacist's role in filling prescriptions.
2. Allow students to tell about their visits to the local pharmacy and the many different kinds of medicine they saw there.
3. Discuss the importance of taking the right kind of medicine and why the pharmacist must know all about things that make up medicines and drugs.
4. A mortar and pestle can be shown as one of the pharmacist's tools.
5. Show how a sugar lump or a soda mint tablet can be crushed into a powder in the mortar.
6. Visit a pharmacy or invite a pharmacist to your school.

Other Health Workers

The Statistician

1. Discuss how health statistics, birth and mortality rates, prevalence of specific contagious diseases, etc. can be used (special help is given where specific diseases are prevalent, etc.)
2. Have children compare death rates of countries with poor health habits with those countries having good health habits.

The Social Worker

1. Identify the role of a social w[illegible].
2. Discuss how he is concern[illegible] with social welfare activities in the community, and acts as a [illegible]nk between community agencies and people with problems involving standards of living, housing, family difficulties and child care.
3. Have children name and locate some of the local social agencies.

HEALTH CAREERS

K - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	The Research Specialist
	1. Identify the role of the research worker.
	2. Have children enjoy library research on new ways that have been discovered to treat disease.
	3. Find stories of famous people of the past who contributed to the advance of medical knowledge through research (vaccination, pasteurization of milk, etc.).
	The Health Educator
	1. As a class project, have children make a scrap book containing pictures, magazine and newspaper articles and pamphlets that inform people about health.
	2. Illustrate how the health educator is one who tries to influence the health behavior of others through education.
	Further Learning Opportunities
	1. Identify and describe in class the special work of other health specialists.
	2. Write riddle-type questions with a designation of "Who Am I?" to pertain to different specialists and health advisors.

HEALTH CAREERS

7 - 9

One's personality and career selection need thoughtful blending.	1. Develop displays and collect current literature on various careers or groups of careers.
	2. Make a chart of your likes, dislikes, interests, abilities or skills and your present and proposed course of study. Relate and compare this information to several health careers you may feel would be of interest to you. Are you building the competencies necessary to meet the skills of the career of your choice?
	3. Discuss what you liked about a certain doctor, dentist, nurse, dental assistant, medical receptionist. In discussion, bring out how job and personality relate.
Helping others may serve to provide deep personal satisfaction.	1. Develop a class or panel discussion on the following topics:
	a) Your feelings when you have really helped someone, overtly or convertly.
	b) Your feelings in relation to a choice of a health career?
	c) Relationship of one's mental and physical health to a career choice.
	d) The place of health careers in satisfying man's search for success, recognition, identity, etc.?

HEALTH CAREERS

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Health careers challenge youth with unlimited opportunities.	1. Make a survey of careers in health fields. Choose one and find out the nature of the work. Search for information concerning the preparation, experience, and health requirements. 2. Study current literature for anticipated health achievements and possible new ways of living. 3. Predict health careers of the future. 4. Inquire of your county or state medical association for health career literature.

HEALTH CAREERS

10 - 12

Recognition that personal qualifications as well as academic preparation are necessary for health occupations.	1. Collect pamphlets and other materials on all fields which relate to health. Investigate funds, grants and scholarships in health careers. 2. Form committees to collect data and report to class on the incidence of disease and other health problems in the United States and other countries showing the need for qualified health-trained personnel. 3. Select three career interests and write a short paper on the qualifications needed, training required, license (if required), functions of and possible need for such personnel: physical therapist, occupational therapist, recreational therapist, medical and social workers, nutritionists, dietitians, registered nurses, practical nurses, nurses aides and attendants, medical and X-Ray technicians, orthodonists, optometrists, opticians, clinical psychologists, health educators, sanitary engineers, dental hygienists and assistants, pharmacists, osteopaths, physicians with specialties, dentists and others. 4. Discuss the interrelatedness of personality, academic ability and interest to career selection.
Deep satisfaction in one's work is essential to good mental health.	1. Discuss basic emotional and social needs and give examples of how some of these needs can be met through helping others in careers in health. 2. How might health careers satisfy man's search for success, recognition, identity, etc. 3. Ask librarians to suggest materials related to careers in the medical and paramedical fields. 4. Invite the school guidance counselor to discuss health careers and the selection of the college or technical school for preparation. 5. Have *students* organize a career night with an emphasis on health related careers. 6. Organize field trips to interview individuals in various professions and occupations; report back to class. Through class discussion, develop questions to be asked and things to look for on the field trip. 7. Develop showcase displays of health careers for School Career Day or National Career Week.

HEALTH CAREERS

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	8. Investigate types of health careers that will be needed in the future (space, electronics, artificial organs, etc.)
	9. Discuss how various types of skills can be applied in health careers.

HEALTH CAREERS

GRADE 13

The concepts for career development in grade 13 will vary little from those of the senior high years. Still many young people will be seeking career opportunity in the first year of college. It is suggested that an effort be made to determine the presence of such individuals in your college class. Should you be aware of such student needs, it is suggested that individual consultation be arranged and some of the concepts and activities suggested for grades 10 - 12 be expanded to meet the needs of the individual student.

HEALTH CAREERS

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611
2. American Medical Association, *Horizon's Unlimited*. (Chicago: American Medical Association, 1966).
3. Department of Education, Bureau of Vocational, Technical and Continuing Education, Health Occupations, Box 911, Harrisburg, Pennsylvania 17126
4. Jones, Kenneth L.; Louis W. Shainberg and Curtis O. Byer, *Health Science* (New York: Harper and Row Publishers, 1968).
5. United States Department of Labor, *Health Career Guidebook*.(Washington:Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402).

HEREDITY AND ENVIRONMENT

Rationale for Unit:

Heredity determines in large measure how you respond to stress and other influences in your environment. The mapping of chromosomes; man's influencing heredity by modifying the nucleic structure; the solution of health problems—these are some of the possibilities in the exciting world of the geneticist. Research on nucleic acid moves us closer to the age-old question, "What is life?" Each individual needs understanding, appreciation and a feeling of responsibility as he lives with this tremendous increase in knowledge of the basic genetic mechanism of man and our increasing ability to influence this basic potential through environment.

It is also a fact that your physical, biological, and social surroundings determine to a degree how well you are able to profit from inherited strengths and minimize constitutional weaknesses.

This unit correlates well with the Family Relationships, Community Health, Anatomy, Physiology, Mental Health and Human Sexuality units.

Basic Concepts:

Heredity supplies the native capacities of an individual. Environment determines to a large extent how fully these capacities will be developed.

Suggested Pupil Outcomes:

1. Demonstrate a knowledge of heredity and its interrelatedness with environment adequate to evaluate related attitudes, behaviors, and values for personal application.
2. Demonstrate a knowledge of basic genetic substances, how they are transmitted, and the impact of this information upon man.
3. Discover and interpret genetic-somatic variations and disorders so as to be able to support those actions which may be possible to accept or eliminate such variations and disorders.
4. Demonstrate a knowledge of adequate eugenics and euthenics to permit the student to make meaningful personal and social decisions.

HEREDITY AND ENVIRONMENT

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
There are likenesses and differences among living organisms.	1. Make charts depicting likenesses and differences of living organisms. 2. Demonstrate that there is air in water: put a bottle upside down in an aquarium, observe bubbles. 3. Observe how plants obtain food through leaves and roots. Contrast this with the ways in which other living things obtain their food. 4. Make a pictorial display of similar needs of all living things (air, light, food, rest, water, etc.) 5. Discuss and observe the other ways we are alike. We all have teeth, lungs, bones, muscles, hearts, etc. We have similar feelings.
Living things are affected by their environment.	1. Grow two sets of plants—give one proper care and deprive the other of good soil, water, sunlight. Frequently compare and discuss results. 2. Discuss homes of hibernating animals and how they are used for winter sleep. Make paper dolls having different clothing for various seasons or for various climates.
Living things can influence their environment.	1. Discuss ways in which people can change their environment in the classroom, home or community (painting, rearranging, beautifying, etc.).
Curiosity about our environment leads to a better understanding of it.	1. Take a neighborhood walk to discover interesting things in the immediate environment. 2. Play a game: "What did you see on the way to school?"
There are male and female humans, just as there are male and female forms in animal life.	1. Visit a farm or zoo, observe the male and female animals. Note the differences in color, size, plumage, etc.
Each parent contributes something to its off-spring.	1. Show an appropriate film or filmstrip which will show contributions of both species in the process of reproducing its kind. 2. Children bring to school pictures of their own families. Observe the ways in which the children are like the father, mother, aunt, uncle, grandparents. 3. Write and illustrate the following statements: a) How I am like my mother b) How I am like my father c) How I am different from my mother d) How I am different from my father- or select any relative or adult.
Each species produces its own kind.	1. Show children packets of various vegetable or flower seeds. Plant the seeds. Observe that the seeds produce the kinds of plants from which they came. 2. Plant cuttings from geranium or ivy plants. Discover that the new plants are the same as the one from which the cuttings were made. 3. Observe the birth of fish in aquarium. Note the differences in size. 4. Use pictures of mother and baby animals or visit zoo.

HEREDITY AND ENVIRONMENT

K - 3

CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
	5. Incubate fertilized chicken eggs. 6. Sprout beans on wet blotter or sponge to observe germination of seeds. 7. Display pictures of mammals and their babies; observe ways in which these animals are alike. (Through discussion help children to discover that these animals did not lay eggs.) 8. Share information about birth of pets at home.

HEREDITY AND ENVIRONMENT

4 - 6

Living things reproduce themselves and develop and interact according to their environment.	1. Plant, observe and record growth of seeds in different environments. 2. Observe natural reseeding of plants on school grounds or in the neighborhood. 3. Grow bacteria on agar plates. 4. Use microscope to observe a cross-section of a tree; observe growth and environmental influences of growth.
Organisms inherit traits which may modify their environment and in turn may themselves be modified.	1. Construct dioramas to show seasonal changes and protective colorations. 2. Draw maps showing migration routes and cycles of various wildlife. 3. Observe and discuss home building habits of animals. 4. Make reports and illustrations showing hibernation and estivation of various animals. 5. Have students read about and report to class on; estivation to realize dormancy is an adaptation to reduce water use by cells. 6. List things man does to modify environment to better suit his needs. (Adjusting clothing to temperature.) 7. Explain the changing environment which brought about extinction of some animals; dinosaurs, fossils.
Each parent organism contributes its own peculiar characteristics to its off-spring.	1. Observe mother and young for family characteristics (ducks, snakes, spiders, crabs). 2. Collect leaves from parent and seedling deciduous tree forms (oak, maple, willow). 3. List individually your physical characteristics that are similar to those of parents or grandparents. 4. Make a heredity chart of your own family, tracing some special characteristics as eye, color, curly hair, etc. 5. At the beginning of the school year, have a project—matching a pure strain brown mouse with a pure strain white mouse. Have children predict color combinations and the ratio of brown to white.

HEREDITY AND ENVIRONMENT

4-6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
All living things develop from a single cell or the union of single cells which is the unit of structure and function.	1. Collect frog, toad, or salamander eggs. Observe, record, and illustrate developmental stages. (Teacher consider gestation period of animal selected.) 2. Construct bulletin board display showing cell structure. 3. Make models or drawings of cell structure. 4. Observe by microscope potato or onion cells, noting nucleus, cytoplasm and cell membrane. 5. Make a clay model showing budding yeast cell. 6. Demonstrate the reproduction of yeast cells. 7. Read and discuss division of fertilized egg cells as applicable to multiple births.
The pattern of the organism is passed along to new cells by duplication of chromosomes and their DNA content.	1. Observe paramecium dividing (bioscopic activity). 2. Discuss ancestry of various plant, flowers or animals. 3. Construct simplified model of DNA molecule to illustrate how it carries genetic culture traits. 4. Have students report on the work of Mendel. 5. Investigate the law of recessive and dominant traits. 6. Demonstrate blending by mixing plants.

HEREDITY AND ENVIRONMENT

7-9

Heredity prescribes the potential for growth and development.	1. Identify information about some of the physical characteristics which are inherited. 2. Identify and describe conditions and practices in the environment which affect growth and personality. 3. Select and view an appropriate film on human heredity.
Each individual is a unique biological pattern.	1. List ways that adolescents begin assuming responsibility for shaping their environment. 2. Observe similarities and differences of identical twins. Why do these similarities and differences occur? 3. Analyze the adjustments necessary for living on the desert, in the mountains, in extreme cold areas, in coastal areas, in the tropics.
Bi-sexual reproduction introduces greater variation in succeeding generations.	1. Observe plants which have been grown asexually from one parent and compare with litter of animals from two different parents. 2. Cite examples showing how people of the same age differ and yet are similar in their growth and development. 3. Compare height and weight records of boys and girls in first, third and sixth grades. Consult school nurse for information. Summarize results in a graph.
Environment includes the non-hereditary forces that affect your existence.	1. Grow a plant (corn, beans) under varying light intensity, note color and growth period to show environmental influences.

HEREDITY AND ENVIRONMENT

7-9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Discuss the following as factors in the environment which affect individuals. a) prenatal influences of drugs, smoking, alcohol, radiations, disease. b) social influences such as family, cultural traditions, economics.
The environment is constantly changing, therefore, the organism is constantly changing.	1. Develop graphs to show how humans become taller and larger as a result of better environment. 2. Discuss role of mutation, differences between acquired and inherited characteristics and difficulty of distinguishing causes of extinction of species in the past and characteristics of groups in certain environments.
Growth and development may be promoted or hindered by body functions, environmental conditions, and the use of certain substances.	1. Discuss body functions that promote or hinder growth and development and physical well-being (e.g. nutrition, activity, rest and disease) as well as other factors influencing physical well-being. (e.g lack of iodine in water supply, rickets, etc.) 2. Discuss environmental conditions affecting growth and development, poverty, lack of opportunity, cultural, and social forces. 3. Investigate inherited conditions which are dependent upon environmental factors to have them become apparent.
Combinations of inherited characteristics are carried in molecules containing DNA in a definite arrangement of chromosomes.	1. Make chains of poppit beads illustrating chromosomes and chromosome interchange. 2. Construct a DNA molecule or use prepared student models for classroom discussion. 3. Show film on the DNA molecule. (Consult librarian or instructional material center specialist for assistance.)
Cell division goes on throughout life by a process called mitosis.	1. Diagram mitosis. 2. Construct models of chromosomes or use prepared student models showing stages of mitosis. 3. Prepared slides showing stages of mitosis.
Transmission of genes occurs through sex cells from each parent.	1. Diagram meiosis. 2. Show film on meiosis and sex cell formation.
One pair of chromosomes determine the sex of the new individual—heterosomes.	1. Discuss supersitions about sex determination. 2. Present current knowledge which helps to dispel these myths.
Inherited traits appear with predictable regularity.	1. Have students trace a family characteristic.
For the few traits in which a single gene is responsible, patterns have been identified.	1. Develop class or panel discussion on the following: a) Dominant inheritance. b) Incomplete dominant inheritance. c) Recessive inheritance. d) Sex-linked inheritance. e) Hemophilia and color-blindness.

HEREDITY AND ENVIRONMENT

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Inherited blood types influence life.	1. Invite a doctor or nurse to discuss pernatal effects of the Rh Factor. 2. Invite a resource person from a blood bank to speak on blood type as a factor in transfusion.
Mutation	1. Discuss accidental or conscious changes an individual can bring about. 2. Observe effects of radiation and chemicals on succeeding generations by introducing experiments with fruit flies, plant life.
Controlled mutation changes in succeeding generations.	1. Discuss Hiroshima - Nagasaki radiation studies. 2. Discuss congenital defects and diseases, some inherited and some influenced by environment.
Euthenics - man's struggle to improve the human race through environmental regulation.	1. Discuss current World Health Organization projects. 2. Consider how the population explosion in the world may eventually affect man. 3. Discuss individual responsibility regarding the science of eugenics. 4. Discuss how education can contribute to man improving his environment. 5. Discuss the statement: What you do or fail to do may be more important than heredity or environment.

HEREDITY AND ENVIRONMENT

10 - 12

The unborn child is sensitive to the effects of its environment.	1. Discuss the sensitivity on the embryonic stage of the internal environment to viruses, drugs, cigarette smoking.
Human progression is a testament to man's desire to control the circumstances of his life.	1. Have class reports on solutions man has made for some of his environmental problems: a) heating and air conditioning b) vaccinations and immunizations c) space medicine d) healing the sick of body and mind e) electronics f) bathyscaphes g) early man and adaptations: wheel, fire, agriculture 2. Have class report on adaptations man has made to environment: a) air and water pollution b) space diseases c) radiation levels and fallout d) control of weather, earthquakes, tidal waves e) war and peace
The transmission of inherited traits is affected chemically.	1. Review basic concepts of DNA, genes, chromosomes; recessive, dominant and sex-linked inheritance (7-9 unit).

HEREDITY AND ENVIRONMENT

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Inheritance is the result of selections and combinations passed down from generations of mating between persons of varying characteristics.	1. Mutations cause variations from expected developments. Discuss the mental and physical variations which are a result of such alterations; e.g. diabetes, hemophilia, etc. 2. Discuss some major causes of mutations such as, disease, drugs, radiations, accidents, and chance.
Environment may produce beneficial or detrimental variations.	1. Discuss prenatal, natal and postnatal environment. (e.g. medical advancements for saving premature babies, anoxia, Rh factor, thalidomide) 2. Discuss individual and family problems which arise as a result of adverse environment such as malnutrition, poverty, housing, climate.
Mutations may be beneficial or detrimental depending upon environment.	1. Trace allergies in families and determine which might be environmentally caused or controlled.
Man has struggled not only to control his environment, but also himself.	1. Discuss theories and principles of eugenics. 2. Investigate choice of a mate as it might affect social improvement and the inherited factors that might affect adjustment to environment. 3. Discuss reasons why some couples might choose not to have children. 4. Report on attempts in past history to produce a regulated race. 5. Investigate Pennsylvania laws which apply to marriage with history of mental illness, first cousins.

HEREDITY AND ENVIRONMENT

GRADE 13

Our minds and bodies today are the outcome of growth and development through countless ages.	1. Refer to experiences included in the 10-12 unit, Heredity and Environment and Mental Health. Trace the changes in cultural patterns pertaining to health practices. From current knowledge, predict some of the future cultural health patterns of man. Predict some of the physical characteristics of the man of the future.
Division of the chromosomes in cell division may be imperfect.	1. Discuss the incidence of mongolism and other congenital defects.
Eugenics	1. Investigate the origin and history of Eugenics. 2. Discuss artificial insemination and experimentation with embryos. Investigate the legal aspects.
Environments have both favorable and unfavorable conditions that foster or hinder the development of one's adaptive capacities, leaving man considerable leeway in development of his own life pattern.	1. Discuss the principles of Euthenics and its application to the development of man to his highest degree through regulation of the environment.

HEREDITY AND ENVIRONMENT

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. Bauer, W.W.; G. G. Jenkins; H.S. Shacter; E.T. Pounds, *The New Health and Safety*. (Fair Lawn, New Jersey: Scott, Foresman and Company, 1966).

   Jones, Kenneth L.; Louis W. Shainberg; Curtis O. Byer; *Health Science*. (New York: Harper and Row Publishers, 1968).

3. National Foundation - Division of Scientific and Health Information, 800 2nd Avenue, New York, New York 10017

4. Schiffers, Justas J., *Healthier Living*. (New York: John Wiley and Sons, 1965).

HUMAN SEXUALITY

Rationale for Unit:

There is general agreement today that a great need exists to have children become aware of the significance of their sexuality. In this, most educators, psychologists, churches and parents groups concur. The school is the only institution which receives all children over a prolonged period. It has the challenging opportunity and obligation to supplement and contribute to their education, and, in some instances, to affect the sometimes distorted view of life they are receiving from television, movies and certain perverted literature.

This unit was prepared with the knowledge that the study of human sexuality is a comprehensive and extensive study which should begin in the home and be supplemented by the schools from elementary through senior high school. Pupil participation in the suggested activities should help to produce desirable social and moral attitudes, practices and personal behavior. The unit not only includes activities that can lead to a knowledge of physiological and psychosexual facts of reproduction and the health concerns of venereal disease, but also includes activities that can help children to develop positive attitudes and practices that can lead to a meaningful understanding of one's self, a mature adulthood, and a happy family life. Further, this unit is intended to satisfy the children's desire to understand the biological man, but not to the exclusion of learning the meaning of character and value judgments as they relate to sex and an understanding of self-discipline and sex control.

This unit correlates well with the following units: Family Relationships, Heredity and Environment, Mental Health, Anatomy, and Physiology.

Basic Concept:

Human sexuality, which involves our growth and development, as well as the complex drives associated with love and marriage, is the basis for many facets of our behavior.

Suggested Pupil Outcomes:

1. Examine and interpret the relationship between sexuality and behavior.
2. Define one's sexuality with maturity commensurate with one's age.
3. Examine and evaluate man's capacity to love and respect.
4. Demonstrate a knowledge of and an appreciation for the process of procreation.
5. Analyze and evaluate the problems of growing up physically, socially, spiritually, emotionally and intellectually.
6. List and describe socially acceptable vocabulary for referring to the anatomy and process of human reproduction.
7. Interpret and evaluate group interaction as it relates to human sexuality.
8. Describe and interpret the psychological and physiological changes which take place in the body and the variance with which the rate of growth differs in each individual.
9. Evaluate inter-personal relations, social mores, authority and respect for others.
10. Identify and examine the fears and anxieties which adolescents have about sex through knowledge of patterns of growth and sexual maturity.
11. Demonstrate a knowledge of the effect which the endocrine glands have on behavior.

HUMAN SEXUALITY

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
There are similarities of growth in living things.	1. Illustrate rapid growth by having students observe a day-old chick. Size will increase greatly during the first few days of its life. 2. Use fertilized eggs and observe incubation and early growth of chicken. Use plastic models of growth of chicken. 3. Show students transparencies or illustrations of male and female child. Have them begin to identify body parts. 4. Growth of a variety of plants and animals should be observed in the classroom. Planting of a variety of seeds should be observed in the classroom. Planting of seeds by each child will provide stimulation for observation of growth.
Young must receive parental care to survive.	1. Use day-old chicks or small animals and discuss the necessity of feeding and cleaning up body wastes. 2. Discuss the parental care of babies in their own homes.
Bathroom sanitation is essential to good health habits.	1. During orientation to classroom procedures, each child should be shown the toilet and washing facilities, and the teacher should discuss the reasons for elimination and essential sanitation habits. 2. Discuss the importance of habits of neatness, sanitation, and courtesy to others in the use of the bathroom.
Strangers can be dangerous.	1. Dramatize the proper reaction to offers made to students by strangers. 2. A discussion about the policeman being the students' friend may be desirable at this age. A visit to the classroom by a policeman might be helpful. Show an appropriate filmstrip.
Living things reproduce their own kind.	1. Have students plant seeds of varying kind and observe their growth. Observe the likeness of each species and compare rates of growth and size of plants. 2. Use transparencies or pictures of adult animals and their young, including the human family. 3. Use transparencies picturing growth from the embryo stages to maturity.
Living things reproduce in many ways.	1. Grow plants from seeds, tubers and bulbs. 2. Discuss the transparencies or illustrations showing the cycles of the frog, pumpkin, chicken, wolf and human. 3. Interested students can get pond water and grasses and add distilled water to cultivate paramecia and other micro-organisms. Observe asexual reproduction.
Young animals have a need for home, food and parental care.	1. Dramatize the mother and father taking care of a new-born child in the home.

HUMAN SEXUALITY

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CONCEPT	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Have children collect pictures showing the different kinds of homes used by animal and bird life.
	3. Chart the developmental stages of different kinds of animal life (When did they first walk, feed themselves, leave their homes).
	4. Discuss the reasons for the various amounts of time needed for full development of different kinds of animal life.
	5. Select a film to illustrate the miracle of fertilization and birth. Local Instructional Materials Centers can be of assistance.

HUMAN SEXUALITY

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Puberty, a time for change in boys and girls.	1. Discuss physical, chemical (hormones) and personality changes that can take place during puberty. Reasons for the changes and why they are necessary for maturation should be stresses.
	2. Show an appropriate movie on growth and development.
Boys and girls differ in skeletal and muscular structure.	1. Observe pictures of the male and female skeletal and muscular systems to illustrate the differences and reasons for these differences.
	2. Emphasize how the difference in body structures are related to different roles in life.
The menstrual cycle is a natural event indicating the body has reached one area of maturity.	1. Discussion, lecture - handled by a person who is competent, confident and understanding.
	2. Select and show current film on menstruation. Prepare class for film and provide for discussion and follow-up afterwards. Invite mothers to attend.
	3. Present the process of menstruation to boys as a separate group. Use an appropriate film.

HUMAN SEXUALITY

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It is important for us to know ourselves.	1. Have each class member list what he thinks would be important to know about himself. Make a listing of items stated by students and discuss their relative importance.
	2. Have class list the characteristics of a healthy personality.
	3. Have students prepare a self-evaluation check list.
Many factors contribute to the formation of personality.	1. Formulation by the class of a personality rating chart listing all the desirable characteristics and traits of a healthy personality.
	2. Develop student reactions to other individuals who do not act, look or believe as we do.
	3. Discuss how attitudes of acceptance are expressed (facial expression, quality of voice, avoidance, friendliness).

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	4. Demonstrate through role playing how persons tend to react in a positive manner to attitudes of friendliness and courtesy and in a negative manner to expressions of hostility.
Each of us accepts himself and others as individuals with varying capacities and abilities for living and working together.	1. Have students develop rating charts of traits that make good friends. Compare charts and individual evaluations. 2. Discuss the difference between "belonging" and being "on the outside" of the group. 3. Discuss social skills necessary in inter-group and inter-personal relationships. 4. Have each student develop a list of the basic emotions and analyze how these emotions affect his life. 5. Stimulate students to discuss the extent to which they should be involved in family decision-making.
Maturity involves physical as well as personality changes.	1. Discuss physical appearances of an individual at different developmental stages in one's life span. 2. Examine the causes for change in physical appearance, e.g., voice, growth of hair on face of boys, growth of hair on pubic and axillary regions on males and females. 3. Present an appropriate film or filmstrip showing the developmental characteristics of boys and girls. 4. Discuss the term "growing up" as it relates to such terms as pre-adolescence, adolescence and maturity. 5. Describe and discuss the changes that take place in boys and girls during adolescence. 6. Develop special study projects related to glands, glandular upsets, and other phases or causes of changes in growth and development. 7. Establish a question box for unsigned questions related to the special problems that often concern adolescents.
A healthy moral adjustment to the adolescent sex drive is essential to individual development.	1. Develop hypothetical situations in which moral judgments would be involved. Have the students investigate solutions to the problem and justify their choice. Follow with a discussion. 2. Critically examine experiences or situations where someone had to make a judgment as to what is right and wrong. Discuss the validity of the choice made and its consequences.
The many physical changes occuring in our bodies, as well as the intellectual, emotional, social and spiritual, are processes for preparing the individual for parenthood.	1. Pre-test to evaluate class knowledge of human reproduction. 2. Show appropriate film or filmstrip on human reproduction. Prepare follow-up discussion period. 3. Relate physical changes to accompanying changes in behavior.
The human fetus develops in a unique manner; normal birth occurs when the fetus is developed sufficiently to survive.	1. Show film or filmstrips to illustrate human fetal development. Discussion should accompany each visual presentation. 2. Discuss heredity and the factors involved. Refer to Unit on Heredity and Environment.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Discuss the care of the newborn baby and the effect which the environment and the attitudes of adults, particularly parents and other members of the family have on the infant. 4. Arrange a visit from a physician to explain and discuss the reproductive process, the growth of the fetus, and the birth process.
Mature judgment concerning dating can lead to good discussions concerning a marriage partner.	1. Collect clippings from the newspapers and magazines about current dating attitudes. Develop opinions about the materials you have gathered and prepare to substantiate these opinions. 2. Study and report on the dating customs in foreign countries. 3. Present a film or filmstrip on dating. Form discussion groups to evaluate or comment on the visual. 4. Make a survey of the students in your school on factors thought important in choosing a good date. Prepare a report and present it to the class.
Most individuals have dating experiences on various levels of maturity. According to their own personal maturity and the influence of the community, these dating experiences may differ.	1. Have students rate themselves as superior, above-average, average, below average, or low in the following evidences of social and ethical maturity. Each student should indicate why he is rating himself as he is by citing one or more specific examples of his own behavior which would justify this rating: A. Self-Confidence B. Self-Reliance. 2. Have separate sex groups develop a date rating chart. Compare and discuss. 3. Role-play situations involving dating etiquette. 4. Select two teams to debate the question: "The pros and cons of going steady." 5. Discuss the meaning of petting and/or necking and have students write out the effects of these behaviors on them personally.
A good moral decision creates trust, confidence, and integrity in relationships.	1. Develop a chart of moral judgments as a self-evaluation technique. 2. Compare past standards with present standards in our society. 3. Have students formulate standards for relationships between boys and girls. 4. Discuss teenage marriages. 5. Develop panel discussion on "The Double Sexual Standard".
Psychological, physiological and environmental factors contribute to the manner in which man expresses his sexuality.	1. Explore the psychological, physiological and environmental conditions affecting homosexuality and heterosexuality. 2. Discuss legislative concerns over homosexuality.
Several infectious diseases can be transmitted during sexual contact.	1. Present appropriate film or filmstrip on Venereal Disease. 2. Discuss syphilis and gonorrhea—causative agents, modes of transmission, incidence of infection, consequences of infection, treatment, cure.

HUMAN SEXUALITY

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Selecting a marriage partner is one of life's most important choices.	1. Discuss the concept of engagement: "Today engagement is viewed as a 'testing period' rather than a promise to marry." 2. Examine the purposes for an engagement period. 3. Analyze the statement: "A broken engagement is better than a bad marriage." 4. Have students list factors they believe would represent a danger signal during engagement. Compile and discuss.
Love is more than physical attraction to one another.	1. Discuss: "Love does not come as a sudden answer to life's basic needs, it is developed gradually through years of interaction with other people." 2. Debate: "What is love?" 3. Compare love with infatuation. 4. Discuss: "Learning to love is certainly one of the most important, and can be one of the most difficult, of all learnings." 5. Make a list of the personality traits you consider most important in the person you would marry. Compare your list with others in the class. 6. Discuss: "How does our American culture influence mate selection?"
Society supports special ceremonies and laws which mark the change from courtship to married life.	1. Review Pennsylvania laws concerning marriage; reasons for the laws. 2. Have students write a short paper describing the differences between civil and religious ceremonies. 3. Assign students various countries and have them write a paper on different marital customs.
An effective family exhibits certain desirable characteristics.	1. Ask the class to develop a list of responsibilities, achievements, aspirations and future roles usually expected of teenagers by the family. 2. Ask class to discuss: a) one family is like all other families. b) no two families are alike c) what kind of family do you want to establish in the future? 3. Develop arguments to refute or support the contention that people should receive special preparation for marriage. 4. Analyze the statement, "I don't plan to get married for ten years; I'll read up on marriage when the time comes."
Systems for intellectual and emotional communication need to be established early.	1. Invite a marriage counselor to speak to the class on communication in marriage. 2. Appoint a committee to prepare three skits showing trifling incidents that may cause quarrels between a newly married couple. Following each skit, ask the class to select the points in each where the trouble began. Then have the actors play the skits again, this time either avoiding or solving the problems that arose in the first one.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Discuss how people inadvertently stop one another from communicating by lack of understanding or inappropriate action. A marriage counselor may give concrete examples of this problem.
Beginning families need to establish ground rules for routine married life.	1. Debate: Spending large sums on a permanent home and working a few years to buy furniture. 2. Debate: Buying a home vs. renting. Have students report on the cost of the interest on a home loan. 3. Have the students use the following steps to budget-making. (Class may decide on income, household expenses, e.g. gas, water, lights, or consult parents for realistic figures.) a) keep a careful record of family expenses for a month. b) list your fixed expenses and obligations. c) list your household expenses. d) list your personal expenses. e) set aside an emergency fund. f) set aside a small amount to be saved. 4. Debate purchasing insurance vs. putting the same amount in a savings account or investment program. 5. Have students interview parents on special consumer problems they have encountered. 6. Analyze various types of advertising as to the psychology behind them. 7. Have class compile a list of ways that consumers may get information.
The intelligent study of divorce is desirable for developing attitudes and understangings that help to build effective marriages.	1. Invite a marriage counselor to speak to the class. 2. Invite a lawyer to speak on legal causes and resultant implications of divorce. 3. Discuss: "People fail, not marriages." 4. Have class discuss the statement, "The best way to solve marital problems is to change yourself, not your spouse." 5. Have a committee survey the community resources available for helping families in a crisis situation and report to the class. 6. Have the class list some of the effects of divorce on children, and discuss how some of the effects could be minimized.
Our society recognizes the need to protect the unity and strength of the family.	1. Invite a lawyer to explain the protection the laws give the members of the family from birth to death, the state's concern for the family as a unit, and for the welfare of each member. Have him review briefly the laws governing family property and rights, laws for the protection of the children, the legal responsibilities of the husband and wife toward each other, toward their children, and toward their own parents. Marriage and divorce laws and laws concerning adoption should be explained. 2. Examine "values" of the American family. 3. Discuss: "Contributions of Religious Faith to Family Values."

HUMAN SEXUALITY

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
A good marital-sexual relationship is the product of mutual understanding and adjustment.	1. Have each student examine his personal development of attitudes toward sex as he can remember them from earliest childhood. Discuss the changes or similarities that have taken place. 2. Discuss what is meant by the "double standard." 3. Discuss: "The ability to wait is related to one's maturity." 4. Discuss: "The fundamental principle of morality concerns the idea that one individual shall not take advantage of another or exploit another for his own satisfaction." 5. Discuss sources of professional help to solve marital sex problems.
A jointly acceptable philosophy of life gives unity to a marriage.	1. Discuss decisions couples must make regarding: a) church attendance b) political affiliation c) social groups to join d) domestic problems 2. Develop a theme on your philosophy of life and the kind of person you would like to marry. 3. Define and discuss the differences between disagreements, discussions, and arguments. 4. Discuss: Will marriage be a means for self-expression or self-denial? Self-control and tact are not inconsistent with honesty.
The family unit is the only socially approved agency of reproduction and its function should be understood by both parents.	1. Have someone visit and report on Health Department Baby Clinics—Parenthood classes, and Prenatal Clinics. 2. Invite a physician to discuss prenatal care to prevent birth defects, and stress importance of current nutritional status of the girls in relation to future role as mother, and stress follow-up care of the baby after delivery. 3. Discuss the dependency of infants in their early years on parents and as a result of such dependency restrictions placed on a couple. 4. Have the class list how a child can accentuate the personal differences between husband and wife. List the rewards of parenthood. 5. Invite a parent to discuss responsibilities and rewards of parenthood.
Good parenthood demands an appreciation of children's needs.	1. Discuss: a) "Self-understanding is an important requirement for good parenthood." b) "The child's feelings of status in the world is primarily determined by the emotional atmosphere of his household." c) "Children benefit more from the forgiveness and patience of loving parents than they do from the knowledge of psychologically well-informed parents." d) "Does a parent rule by divine right?" e) "Consistency is probably the most important ingredient for good discipline. Consistency should exist between parents." 2. Have students list ways they share their lives with their parents. Discuss desired changes in activities or responsibilities that are shared.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Stimulate students to react to the statement "The imposing of one's will upon another must be tempered with love, empathy and understanding."

HUMAN SEXUALITY

GRADE 13

Personal decisions concerning sexual conduct are intimate, individual decisions, unique in time, place and the personalities involved.	1. Have students do research followed by discussion of the effect of family and culture in which one is reared on the individual's attitudes toward sex. 2. Discuss the effect of sex attitudes and adjustment before marriage upon sex life in marriage.
Physiological factors influence an individual's attitudes toward sex.	1. Discuss hormones and acceleration of growth as factors influencing sex attitudes. 2. Discuss love, lust, romance and infatuation.
One's philosophy of sex can determine whether certain practices are sex-releasing or sex-stimulating.	1. Discuss: Social dancing can be a sex-releasing activity for one person while it can be sex-stimulating for another. 2. Apply this concept to the pornography type literature purchasable on nearly every newsstand.
College men and women experience premarital adjustment problems.	1. Discuss premarital intercourse, petting, heterosexuality and homosexuality. 2. Debate: "Premarital relations are right if both partners love one another."
An individual inherits both his environment and his nature.	1. Have class research and discuss the relationship between heredity and environment in determining the character of man. 2. Investigate the series of nucleic acids, DNA and RNA.
Moral issues of the future will be governed by present research in genetics.	1. Research and discuss the achievements of medical science in the area of chemically controlling genetic characteristics. Discuss the moral and social implementations of this line of research. 2. Role-play the following situation: A young woman, about to be married, asks her parents for advice concerning having children. Her questions have not to do with how many children or when to have them, but with predetermining hair and eye color, body build, size, intelligence, etc.
It is for the sake of creating a happy family of one's own that one seeks fuller knowledge of human reproduction.	1. Invite physician to discuss: a) The formation of the sperm cell and ovum each with its genetic complement. b) The male and female reproductive systems from the standpoint of homologous structures and compatability. c) The crucial factors involved in conception. d) Fertility of male and female. The relationship between the ovulating cycle and the menstrual cycle.

HUMAN SEXUALITY

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Pregnancy and childbirth are natural events of human life.	1. Research and discuss the difference between Victorian and modern attitudes toward pregnancy and childbirth. 2. Invite a physician to discuss: a) How diagnosis of pregnancy is made. b) How the "timetable of pregnancy" correlates with the intra-uterine life of the infant-to-be. c) Discuss the stages or steps of normal spontaneous delivery of a new-born child beginning with the first suspicion of "labor pains." 3. Debate: a) The process of childbirth is and forever will be a mystery. b) Childbirth is exclusively a woman's business.
One's point of view on sex is affected to a large degree by his previous experiences with a religion.	1. Research to determine a common ground of modern Protestantism, Roman Catholicism, and Judaism on the following units: a) the role of the parents toward their children b) the relationship of love and marriage c) the conditions that make for a happy marriage d) the value of permanence in marriage relationships e) the desirability of parenthood f) attitudes toward sex in marriage g) attitudes toward sex outside marriage h) intermarriage i) monogamy j) religious symbolism drawn from family life 2. Discuss the implications of the statement: "Children are a gift of God." 3. Discuss: "Are the goals and aims of marriage significantly different in cultures and societies not so strongly influenced as the United States by Judeo-Christian traditions?"

HUMAN SEXUALITY

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Association of Health, Physical Education and Recreation, 1201 16th Street, N.W., Washington, D. C. 20036
2. Jones, Kenneth L.; Louis W. Shainberg; Curtis O. Byer; *Health Science*. (New York: Harper and Row Publishers, 1968).
3. Kimberly-Clark Corporation, Educational Department, Neenah, Wisconsin 54956
4. Pennsylvania Department of Health, Health and Welfare Building, Box 90, Harrisburg, Pennsylvania. 17126
5. Personal Products Company, Director of Education, Milltown, New Jersey. 08850
6. Public Affairs Pamphlets, 381 Park Avenue South, New York, New York 10016
7. School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design*. (St. Paul: 3M Education Press, 1967).
8. Science Research Associates, 259 East Erie, Chicago, Illinois 60611
9. Sex Information and Education Council of the United States, 1855 Broadway, New York, New York 10019
10. Tampax Incorporated, Educational Department, 161 East 42nd Street, New York, New York 10000
11. Time, Inc., Rockefeller Center, New York, New York 10020

MENTAL HEALTH

Rationale for Unit:

Mental health combines a reasonable degree of self-knowledge with the ability to manage one's environment in both a satisfying and growth-producing way. A balanced person possesses a realistic perspective of himself as a whole person and relates effectively to other people in general and to the world at large.

Sound mental health is not a separate entity and cannot be taught as such. Rather it is but *one* aspect of total health, and cannot be considered apart from physical and social well-being. What a person esteems himself to be affects and is affected by both of the above. This has very significant consequences to the school.

The role of the teacher is not that of a psychologist and does not involve clinical diagnosis nor treatment of any known aberrations. However, the importance of the educator cannot be overstressed. The teacher must continually strive for insight into his own personality before he is able to contribute positively to another. What he is becomes as important as what he does! While a teacher's responsibilities are varied and complex they begin with the realization that teacher-student relationships have direct bearing in either a positive or negative sense on the child's thought processes and behavior. Further, the teacher needs to impart comprehensive knowledge and cultivate wholesome attitudes which will equip the student to deal with life situations.

In adapting the material on Mental Health, it is important to emphasize that the conceptual approach aims at identifying meaningful and relevant "ideas" on a continuum basis ranging from simplicity to reasonable complexity. These concepts or *big ideas* should be helpful in the growth and development of the pupil. Moreover, their natural outcome should be a series of well-related, comprehensive student activities that are of a relatively predicable influence both on the body of knowledge and the behavior of the student. His growth in factual information *should* lead to wiser and more mature decisions personally and a more meaningful interaction of individual, family, and community.

It must be recognized that emotional conflict, either within or without the periphery of the school impairs the learning process in any or all intellectual areas. Self-regard, facing reality, group relationships can all be handled in a continuous, unobstructive way as an integral part of the day's teaching, but cannot stop there. The assistance given according to individual need must extend beyond classroom instruction to student conferences, parent interviews and sometimes recommendations for specialized professional guidance beyond the classroom. In dealing with student problems, let the teacher remember that "2 heads are better than one, but 2 hearts are even better that 2 heads."

Mentally healthy behavior will enable the student to enhance every aspect of his life. He will be a vital member of his family and his school and, of course, the democratic society to which he belongs.

Basic Concept:

Mental health is a continuous thread of total health. It combines within the person realistic perceptions of self and the world and should assure positive and productive interactions of:

Man with himself
Man with other men
Man with his environment

Suggested Pupil Outcomes:

1. Discover through the study of mental health an understanding and acceptance of self.
2. Identify and interpret emotional stabilities that will permit optimum use of inherent abilities.
3. Ability to control reactions to life situations.
4. Develop criteria for effectively relating to changing situations, physically, emotionally, mentally and spiritually.
5. Conclude that to function in society practically and productively is humanly desirable.
6. Evaluate conditions for happiness or well-being and demonstrate methods for dealing realistically with those things which may threaten it.
7. Compare and contrast the various behaviors of mental illness.

MENTAL HEALTH

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
"You" as a person are very, very important!	1. Plan a booklet that will use pictures from baby days to present age. 2. Use pictures on a bulletin board THEN, (baby picture) and NOW (up-to-date picture). 3. Plan a self-portrait using yarn, pipe cleaners, scraps of yard goods, buttons, etc. 4. Draw pictures of things I like to do.
Everyone is different. You can do certain things well—better than others—yet some can do things better than you can.	1. Demonstrate things which you can do now that you could not do when younger. 2. Compare specific differences in pets, flowers, people. 3. Bring in pictures of children engaged in different types of activities. 4. Talk about what you would like to be when you grow up.
You should be proud of those things you do well.	1. Draw a picture of you doing things you like to do and do well. 2. Make up a story about helping at school and at home me. 3. Bring to school things you have done—painting, sewing, etc. 4. Develop displays of children's work.
Responsible behavior is a part of growing up. Improving behavior tells others you are growing up.	1. Read stories that will illustrate children whose behavior indicated they were growing up. 2. Plan a discussion about responsibilities at home. 3. Make a class list of desirable behaviors at home, school and at play, encourage weekly checking of behavior practices and suggestions for improvement. 4. Conduct a discussion of traits the children evaluate in others as acceptable.
Feeling sad and happy are part of life; one's adjustment to these feelings in ourselves and others is most important.	1. Talk about times when you are glad and times when you are sad and the things that cause you to feel this way. 2. List the things we can do when we feel upset. 3. Discuss how to help other people when they are sad. 4. Develop the idea of "putting oneself" in another's situation.
Respect for the rights and property of other people as well as my own.	1. Collect pictures of people showing respect for one another. 2. Make a list of the things I must do and not do with regard to family and friends. 3. Discuss punctuality, game rules, taking turns, sharing, etc.
There is a difference in tattling and real concern for the things people do.	1. Discuss the babyishness of tattling. Compare with situations involving a student or a citizen that must be told.

MENTAL HEALTH

4 - 6

With growth, development and desire for independence comes also the need for an acceptance of responsibility.	1. Discuss the outcomes and hazards of *not* caring for possessions. 2. Discuss one's responsibilities now and list suggestions on how to increase personal responsibilities.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Create and role-play stories involving self-reliance.
	4. Engage in group "buzz" sessions on how to make one's own decisions, to be a good leader and a sensible follower.
	5. Develop a list of class "chores", change weekly.
Development of habits contribute to one's mental health.	1. List your study habits - develop a list of good habits suggested by class members - contrast, compare and discuss.
	2. Discuss habits developed in langauge, behavior, dress, chores, etc.
Everyone has certain gifts—and using these gifts can be very satisfying.	1. Discuss ways of being creative and using one's talents. Art or social studies may prove good areas to develop projects and correlate this idea.
	2. Write a play permitting the students to direct and plan it as far as they are able. Use students according to their talents. Afterwards discuss and bring out how together many talents were used for the enjoyment of all.
	3. Encourage students to do some writing in poetry, essay or develop expression of interests through art, music, physical education, etc.
	4. Propose hypothetical problem situations and assist students in developing a solution using the thoughts and ideas of many.
Consideration for others is a healthy "growing up" sign.	1. Use role-play to dramatize how a person can ease the hurt feelings of another; discuss how to prevent hurting them.
	2. List "behaviors" of growing up.
	3. Construct a list of the characteristics which help one to be admired and get along well with others. Develop self-check.
Differences in people require another's respect and understanding.	1. Discuss the several races and cultures of people. Develop reports on each race represented.
	2. Role play how it feels to be different from others in terms of religious beliefs, race, culture and customs. Discuss how such differences demand understanding.
	3. Set up some type of exhibits representing different faiths, races, and countries.
	4. Compare the cultures of many lands.
Emotions such as fear, love, hate, jealousy, have a variety of expressions.	1. List things which people validly fear, e.g. war, earthquakes, illness. Discuss reasons which cause these fears to develop.
	2. Illustrate things I love: my pet, my bicycle, my favorite food.
	3. List "my 10 favorite things" — kittens, toys, moonlight, ice cream, my mother, my father, etc.
	4. Develop a paragraph or two on: "When I wanted something I couldn't have."
	5. Role-play and discuss negative emotional behavior.
	6. Compile a group of pictures showing anger, sadness, hate, love, joy, and discuss them. Develop stories which could relate to the picture offering suggestions as to why each emotion is expressed.

MENTAL HEALTH

4-6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Anger, hate, frustration do occur and can be controlled or accepted.	1. Discuss "hate," indicate its inherent dangers. 2. List suggestions on how to control these emotions. 3. Discuss wholesome outlets for "pent up" anger, letting off steam and tantrums, e.g. taking a walk, straightening your room, reading a story, etc.
Friendship is a great joy and one of man's greatest gifts.	1. Write a paragraph on, "The Quality of Friendship." 2. Discuss forgiveness of others; the difficulty and joy.
Honesty and dishonesty influence behavior.	1. Analyze the effects of dishonesty; the personal gain in being honest. 2. Compare cross-cultural concepts of honesty.
Rules and policies have a definite and important place in your life.	1. Conduct a panel on school rules. 2. Involve the nurse, librarian and principal in a panel on rules which govern their area. 3. List rules which influence our behaviors at home, church, and community.
Confidential discussions often provide solutions to seemingly difficult problems.	1. Discuss the idea of keeping confidences. 2. Discuss the characteristics of people with whom you could discuss a serious problem.

MENTAL HEALTH

7-9

Self-respect comes from within you and does not come from material possessions.	1. Discuss the lives of individuals such as Lincoln, Helen Keller, Marie Curie, Glenn Cunningham, etc. 2. Panel Discussion on "The person I most admire—Why?" or "People I Love". 3. Write a paper on, "The Most Unforgetable Individual I Have Ever Known."
You are a "self", involving physical, mental, emotional, spiritual components that must function as an integrated whole.	1. Identify the basic human needs and discuss how these needs are met (love, security, acceptance, etc.) 2. Illustrate through role playing appropriate and inappropriate expressions of these emotions. 3. Have a panel discussion on the specific role of each area of self, stressing the imbalance of personality which may result from the overindulgence of one area and the underdevelopment of another. 4. Compile a collection of newspaper and magazine clippings that deal with cases involving conflict with emotional and social needs, (particular emphasis on young people). Suggest possible preventive measures and probable situations.
Sound mental health means being on "good terms with yourself," accepting others as they are, and meeting the demands of life as best you can.	1. Discuss the impact of self-respect and mental health. 2. Discuss problems in general and compare those which are within the area of control, those which are beyond it and the value of adaptability or the courage to "accept what cannot be changed."

MENTAL HEALTH

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Write a composition "Me, as I see Myself," or "Me, as I would like to be". The composition may be inclusive of both thoughts. 4. Invite a psychologist to explore the realm of self-acceptance and acceptance of others as they are.
Individual differences and group conformation both imply strong emotional impacts on one's emotional structure.	1. Write a theme on, "When does the right to differ infringe on the rights of others?" 2. Develop a panel on peer-group influence; how to evaluate and participate in fads; and/or how to react to non acceptance by one's peer group. 3. Discuss the strengthening of a group by positive contributions of individual members.
Your personality develops as a continuing process.	1. Give examples of how experiences modify our views of self, others, the world, successes, failure, new knowledge, people, science, etc. 2. Buzz sessions on traits which are either liked or disliked in others Discover why.
Roles and responsibilities change as you mature and your behavioral choices carry inherent responsibility for consequences.	1. Discuss the possible outcome of imprudent behavior, e.g. driving, cheating, drinking, petting, etc. Correlate defense mechanisms used to avoid personal responsibility for the consequences. 2. Establish buzz sessions to evaluate problem areas regarding behavioral responsibilities.
Your problems and frustrations are individual, yet all people of all societies deal with conflicts of a similar nature.	1. List problems you feel are the same the world over. Discuss reasons for the similiarities noted.
Help is sometimes necessary in resolving one's problems.	1. List and describe the services of persons to whom you may turn when problems arise. 2. Invite counselors, clergy, social agencies and representatives to visit the classroom for purposes of discussing the availability of help for students who cannot help themselves. 3. Conduct a student survey to determine how often students utilize guidance in solving their problems and if not, why not?
Misconceptions develop regarding the true nature of mental illness which are barriers to realistic attitudes of prevention and treatment.	1. Explore studies on epilepsy, cerebral palsy, deafness, and muteness to show the fallacy of direct relationship between these problems and mental and emotional maladjustments. 2. Investigate cross-cultural reports on mental illness. 3. Invite professional resource people to visit the classroom.

MENTAL HEALTH

10 - 12

Personality is a composite of one's total being.	1. Have committee investigate the influence of heredity, environment, health and education on the personality. 2. Examine the implication of a statement such as: "She has no personality."

MENTAL HEALTH

10-12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Goals and objectives must be realistic to be meaningful.	1. Invite your guidance personnel to speak on aptitude tests, vocational testing, standardized testing. 2. Investigate broadening educational standards needed to launch successful careers. 3. Discuss how the qualities needed for success might be developed in the context of a changing economics.
Your personal values emerge as a result of family influence and other varied experiences.	1. Make a check-list of personal and/or family values and discuss the basis for them. 2. Form a panel to debate how value systems affect behavior patterns –examine positive and negative persistence in completing a job, cheating, pre-marital pregnancy! 3. Discuss through buzz sessions such topics as: "Does having the courage of one's convictions mean one is stubborn?" and "Everybody's doing it."
Individuals affect and are affected by other individual's mental health.	1. Define constructive and destructive criticism. 2. Investigate the difficulties of truly objective criticism.
The emotional climate of society in general, and the home, school and community specifically affect one's mental balance either overtly or covertly in many ways.	1. Discuss the emotional needs of children and ways in which they can be satisfied. 2. Discuss mother-father employment and its effect on the "climate" of the home. 3 Investigate the Harlow Studies involving the rearing of baby monkeys. 4. Discuss the meaning of cultural deprivation. 5. Examine the effect of peer-group ostracism.
The cultural environment in which one is raised conditions the individual.	1. Examine "normalcy"; its determinants and effects as conditioned by environment. 2. Discuss "What is Reality?" in buzz session groups. 3. Examine the effect of one's self-image on self and others. 4. Compare and contrast cultures of other countries with their environmental conditions.
Mental illness is varied in cause and degree and methods of treatment.	1. Report on possible causes of mental illness; list types, treatment, old and new by way of drug therapy, psychotherapy, clinics; open-door institutions. 2. Plan a visit to a state or private institution for the mentally ill.
Attitudes in mental health need to be realistically evaluated in order to treat problems more effectively.	1. Investigate resource material to illustrate improvements in mental health therapy. 2. Conduct a survey of state and community assistance for the mentally ill.
Some physical illnesses are conditioned by emotional conflicts.	1. Investigate the differences in the symptoms of a hypochondriac and those of psychosomatic origin.

MENTAL HEALTH

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Examine and chart the types of ailments that have emotional undertones.
Mental illness occurs at all ages, to both sexes and to persons irrespective of social class or status.	1. Develop a list of sound mental health habits. 2. Examine statistics on mental illnesses and the trained personnel involved in their treatment. 3. Examine the differences between mental illness and mental retardation.
Research is the key to continuing progress in the treatment of mental illness.	1. Investigate research advances in such areas as measles, prenatal care and birth injury.

MENTAL HEALTH

GRADE 13

Maturity is the ability to deal with situations of your life in a realistic and effective way appropriate to your age level.	1. Self-check on signs of mature behavior: a) handling of money wisely b) sound study habits c) good rapport with parents and teachers and peer groups d) ability to decide for oneself rather than to accept group decisions e) ability to trust and be trusted f) share yourself with another person g) sense of integrity
Feelings of insecurity, self-consciousness and lack of confidence are not atypical.	1. Discuss the conflicts and suggest ways of lessening tensions involved. 2. Invite a psychologist to meet with the class.
As young adults, establishment of responsible relationships create a sound sense of well-being.	1. Discuss and expand the term "responsible relationships", as it relates to such areas as: a) premarital pregnancy b) imprudent experimentation with drugs c) parent communication d) alcohol
Situations are frequently many sided - consideration of each side enhances satisfactory resolvement.	1. Discuss "situation involvement" as total consideration and recognition of such aspects as: a) person's involved b) background—emotionally, educationally, economically, socially c) circumstances of situation d) before a resolution is reached determine if it is best for all concerned under the circumstances at this particular time. 2. Create problem situations and discuss possible ways of resolution.
To be part of society is to be involved.	1. Discuss the idea of non-involvement regarding the needs of others. 2. Collect for discussion or debate current news items involving incidents of involvement or lack of involvement.

MENTAL HEALTH

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The need for security should be balanced by the need for achievement.	1. Explore the idea that achievement is a *need* throughout life. 2. Structure a panel on ways of achieving other than intellectually.
Adjustment mechanisms are used by people with unsatisfied emotional needs.	1. Investigate the following adjustment mechanisms: Rationalization Sublimation Repression Projection Identification Substitution Withdrawal Day Dreaming 2. Present oral reports on those which are used most frequently by students.
Proper handling of emotional problems requires constant sensitivity to self and others.	1. Discuss ways of keeping a wholesome balance; e.g., develop interests, be cooperative, maintain social relationships. 2. Develop a paper on your philosophy for sound mental and emotional health.

MENTAL HEALTH

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. Bauer, W. W.; G. G. Jenkins; H. S. Shacter; E. T. Pounds; *The New Health and Safety.* (Fair Lawn, New Jersey, Scott, Foresman and Company, 1966).
2. Irwin, Leslie W.; Harold J. Cornacchia; and Wesley M. Staton; *Health in Elementary Schools.* (St. Louis: C.V. Mosby Company, 1966).
3. Mental Health Materials Center, 419 Park Avenue South, New York, New York 10016
4. National Association for Mental Health, Inc., Director of Education and Program Services, 10 Columbus Circle, New York, New York 10019
5. Pennsylvania Department of Health, Health and Welfare Building, Box 90, Harrisburg, Pennsylvania 17126
6. Pennsylvania Mental Health Association, 1601 Walnut Street, Room 214, Philadelphia, Pennsylvania 19103
7. Schifferes, Justis J., *Healthier Living.* (New York: John Wiley and Sons, 1965).
8. School Health Education Study, *Health Education: A Conceptual Approach to Curriculum Design.* (St. Paul: 3M Education Press, 1967).
9. United States Department of Health, Education, and Welfare, Children's Bureau and Public Inquiries Branch, Washington, D.C. 20201

NUTRITION

Rationale for Unit:

Securing adequate nutrition is a major health problem. As a nation, we eat well; as individuals, we do not, but not because our foods are insufficient in quantity or variety. Our country provides an excess of foods to its population. So much so that obesity is a major problem and foods and beverages are advertised on the basis of low calorie content. Dietary fads and reducing fads thrive upon inadequate public knowledge and faulty practices.

Without a definite program of nutrition education, started at the beginning of their school life, children are apt to confine their choices to favorite foods. Likewise, children cannot project benefits into the future and so have no concern or appreciation for what the future will bring if they fail to eat properly now. Nutrition education should be stressed to boys as well as girls. The changing status of the family with working mothers and parental sharing of household responsibilities indicates a necessity for everyone who has an influence on children's eating habits to be aware of the implications of good eating patterns. The emphasis and practice of eating and choosing the right foods must be learned.

The school's major concern is in the promotion of sound dietary habits. The challenge is to break the traditional boredom of memorizing nutrients and food groups and move into the field of stimulating nutritionally grounded experiences. Eating is essential for life!

Some of the understandings of this unit may well be correlated with the units on Alcohol, Consumer Health Education. Dental Health, Anatomy, Physiology and Physical Fitness.

Basic Concepts:

Optimal growth is dependent on personal health practices and wise decisions.

A variety of food assures good nutrition.

Knowledge of metabolism and caloric intake and output is basic to the development of a sound body.

The food buyer is exposed to a selection of foods and beverages which are pleasing to the taste, but often lacking in dietary essentials.

New methods of processing and preserving foods provide varied diets from the simple, natural foods of the last century.

Suggested Pupil Outcomes:

1. Demonstrate a knowledge of the relationship of good nutrition, adequate sleep and physical activity to the body's growth and development.
2. Discover and evaluate how behavior while eating can influence body processes in both a negative and positive manner.
3. Demonstrate a knowledge of the basic principles of meal planning.
4. List and describe methods for handling and preserving foods. Demonstrate their application to consumer use.
5. Examine and evaluate the problems of obesity at various age levels.
6. Demonstrate a knowledge of the cause and correction of certain digestive disorders, deficiencies and diseases.
7. Demonstrate a knowledge of the basic digestive process and its relationship to total health.

NUTRITION

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Food sustains life.	1. Plant seeds and observe their growth. Use soil with: (1) insufficient nutrients, (2) adequate nutrients and (3) too many nutrients. 2. Observe growth of tadpoles and chart their growth patterns. 3. Place grass seed in a sponge and water - observe pattern of growth. 4. Tell stories or draw pictures about foods animals eat. 5. Discuss what makes us hungry and how food affects our bodies.
Food is essential for normal body growth.	1. Keep height and weight charts for review of growth patterns. 2. Dramatize good posture through role play situations. 3. Make cut-out figures to show good and poor posture under varying circumstances. Such figures may be made adjustable for adaptation to multi positions of posture. 4. Practice good posture in games, marching and other activities. 5. Observe and discuss the eating habits of pets; note differences between large and small animals. Have students bring in small pets that can be cared for and observed in the classroom. 6. Compare your food intake with an older and/or younger brother or sister or your parents. Discuss the differences observed. 7. Discuss: Bears need to eat when they hibernate; we work better if we eat breakfast; babies are less chubby after they learn to crawl and walk; we are not hungry when we are sick; we are very hungry when we get well.
Discriminate selection of foods is essential for an adequate diet.	1. Discuss lunches or lunch menus in terms of: a) what foods were served today that came from the dairy? b) what foods were grown underground? c) what foods were grown on a tree, on a vine?
Some foods are more nutritional than others.	1. Construct a food train made from cartons composed of an engine and four cars. Each car should be designed as one of the basic four food groups. Make models of wide variety of foods and place in appropriate car. 2. For a parent's day or open house, plan a party serving snack foods which are nutritious and healthful. 3. Discuss the relationship of foods to specific countries or nationalities. Use foods served in the cafeteria as examples. 4. Make giant paintings of fruit and vegetables on large paper or cloth sacks. Cut holes for arms and head. Use in play or skit to tell the class about each food; its taste, food value, place of growth, etc. 5. Play store using stand-up pictures. Shop for foods (stocked with empty cans and boxes). 6. Make a "good foods" booklet. Show a variety of foods from the basic four food groups. 7. Make a food chart showing balanced meals from the basic four groups.

NUTRITION

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	8. Make simple food mobiles depicting: (1) four basic food groups, (2) balanced meals, (3) unbalanced meals, (4) nutritional snacks, etc.
Certain behavior while eating is important to enjoying and getting the most out of our meals.	1. Discuss preparation for meals (washing hands, cooling-off from play activities). 2. Demonstrate proper use of napkin at table. Discuss small bites, eating slowly, elbows on table, cheerful conversation, use of utensils.

NUTRITION

4 - 6

Work efficiency depends upon adequate food intake.	1. List and discuss the foods you ate for breakfast this morning. 2. Make a bulletin board display of reasons why we eat (growth, energy, feel better, etc.). 3. Compare how often we eat to how often we feed our pets. 4. Investigate the relationship of accidents, errors, misjudgments, to food intake. 5. Discuss food intake of people involved in different occupations.
One's diet is determined by numerous conditions, hereditary and environmental.	1. Discuss how tastes affect what we select to eat. 2. Discuss advertising media and its effect on family food purchases and diet. 3. Through role play discover ways to encourage and create a relaxed mealtime.
All nutrients needed for growth and development are available through the foods we eat.	1. Make six different colored blocks of construction paper. Designate each as a vitamin, fat, carbohydrate, water, etc. Build different foods with the blocks. Make comparisons. 2. List foods you dislike and find substitute foods supplying equivalent nutritional value. 3. Visit the school kitchen to find out how they store foods to conserve nutritional value; e.g. refrigerator, freezer, cold, dry, etc.
A balanced diet is essential to good health.	1. List and discuss current food fads. 2. Discuss the spending of allowance money on food treats. Discuss the balances of treats and nutritional foods. 3. Discuss the nutritive value of coffee and tea. 4. Discuss possible reasons why we eat desserts last at meal time. 5. Compile a booklet of information on milk. 6. Choose a food such as milk or eggs or a favorite vegetable. Make a little book chart showing the many ways to serve this food, how the food aids in growth and development, etc.
One's daily diet should be planned each day to include foods which provide sufficient amounts of nutrients and calories.	1. Collect menus from the cafeteria for a week and evaluate them for their "basic four" contributions. 2. Exhibit a display of healthful foods in the school lunchroom.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Prepare a sample breakfast, dinner, snack, and party menu. Compare with your own daily intake. 4. Discuss implications of obesity. 5. Compare obesity to caloric intake and output. Demonstrate how our body uses and/or stores food.
The digestive system changes the food into a usable form for the body cells.	1. Draw and label the digestive tract or construct a model of the digestive tract. Discuss how food is processed by the body. 2. Demonstrate the process of peristalsis and discuss its purpose. 3. Present oral reports on functions of various digestive fluids; e.g. saliva, gastric, bile, pancreatic, intestional, etc. 4. Draw a small section of the small intestine (enlarged) to show how nutrients pass into the blood. 5. Have a "spelling bee" incorporating words commonly used in our health vocabulary; e.g. abdomen, appetite, nutrition, vitamins, etc. 6. Discuss the effects of personal eating habits and/or regular exercise on the functioning of the digestive system.
One's feelings and emotions may affect the digestion of food.	1. Discuss: a) if and how feelings of happiness or sadness influence digestion. b) if and how fear, hate and anger relate to digestion. c) if and how rest and relaxation relate to digestion. d) how physical activities immediately after meals relate to digestion. e) the effects of a quick or hurried meal.
Certain processes make eating a safe, varied and interesting part of our lives.	1. Investigate laws pertaining to the pasteurization of milk. 2. Investigate laws pertaining to the enriching and labeling of processed food. 3. Investigate the advantages and disadvantages of each of the processes used to preserve food; e.g. cooling, canning, drying, dehydration, freezing, smoking, salting and pickling. 4. Expose a variety of foods to the air at room temperature. Note how long it takes for each kind of food to spoil. Discuss how these foods are "kept" when they are transported and when they are in stores. Identify the signs of food spoilage: odor, change in texture, change in appearance and color and change in taste. 5. Soak some dried food such as prunes, raisins, macaroni, milk, and soup in water; observe the effect on the food. Permit the soaked food to remain exposed to the air at room temperature for several days. Discuss why the soaked food spoiled, but when it was dried out did not. 6. Organize a panel to discuss the values of enriching foods (milk, bread, cereals, juices). 7. Observe under a microscope the growth of bacteria or mold that appears on spoiled food. 8. Invite a home economist to speak to the class about preserving and enriching food.

NUTRITION

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Many steps have been and are being taken to solve world food problems.	1. Investigate and discuss current world food problems. 2. Discuss organizations involved in world food problems: Food and Agriculture Organization (FAO), World Health Organization (WHO), International Children's Emergency Fund (ICEF).

NUTRITION

7 - 9

Selection and maintenance of one's diet today may have far reaching effects.	1. Investigate changes in nutritional habits within the 20th Century. List causes of these changes? Are they sound? 2. Investigate the factors which may affect your weight now and throughout your life, e.g. fashions, height-weight charts, physical activity, heredity, fads, cultural habits, physiological and psychological factors, etc. 3. Survey the number of students in class who are eating breakfast, as well as the nature of the food consumed. This may be done in writing without having students sign their names to their paper to avoid possible embarrassment.
One's weight may affect appearance self-confidence, relationships with others and personal health.	1. Identify and discuss causes of obesity, e.g. overeating, poor eating habits, glandular disturbances, emotional disturbances. 2. Discuss effect of family or cultural eating habits on obesity. 3. Evaluate the disadvantages and dangers of obesity, e.g. fatigue, discomfort, play and exercise, limited group activity, personality difficulties, job handicaps and the effect on such internal organs as the heart, arteries and kidneys. 4. Identify and evaluate the causes and dangers of underweight such as worry, disease, fatigue, vitality, heredity, poor eating habits and lowered resistance to disease. 5. Collect newspaper clippings and advertisements about crash diets, reducing fads, reducing pills, and quackery. Discuss and analyze weight reducing procedures. 6. Invite an interested physician to discuss weight reduction. 7. Invite personnel involved in nutrition research to discuss weight reduction with class. 8. Prepare articles on weight reduction, diet, exercise, etc. for the school newspaper. 9. Develop a panel discussion on, "Diet and its relationship to weight control." 10. Invite an athletic coach to discuss weight loss and gain in the training process of athletes.
Some foods are better than others for snacking.	1. List common snack foods and discuss in terms of caloric and nutritional value. 2. Conduct a survey of snack foods eaten by students. 3. Discuss the eating of nutritious snack foods such as milk, fruit, fruit juices, nuts, celery and carrot sticks instead of cake, candy, cookies and soft drinks.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	4. Organize a club for the promotion of nutritious snacks. Advertise in the school paper.
Body processes need all known nutrients.	1. Divide class into "nutrient groups"; report on discovery of the nutrient, its function, and its sources. Emphasize experimentation and visual aids in presenting the report, e.g. soak a small uncooked bone in vinegar for a few days. The mineral matter will dissolve and the bone will lose its strength and firmness so that it can be easily bent. This experiment demonstrates the presence of minerals especially calcium and phosphorus in bones and points up the importance of minerals in the diet. 2. Prepare a resume of the above reports in chart form for bulletin board display, e.g. Nutrient-What It Does-Sources. 3. Using two sibling rats, conduct a feeding experiment in which one of the rats receives milk to drink and the other receives coffee in addition to food. Observe any growth or appearance differences. 4. Investigate relationships between diet and complexions. Refer to articles, dermatologists, personal experiences, etc.
Digestion - the process of food assimilation.	1. Review the process of digestion. How does food become you? 2. Demonstrate and discuss the process of digestion through reports, written, oral and visual.
Food is an integral part of cultural patterns.	1. Develop lists of traditional or regional foods eaten by your cultures or nationalities when celebrating special occasions. Emphasize factors influencing choices: climate, region, nationality, traditional festivities, storage available, seasonings and preparation. 2. Investigate the origin of three meals a day. 3. Invite the Home Economics teacher to discuss cultural patterns of diet. 4. Prepare bulletin board displays, showcase exhibits, or dioramas showing food models, pictures of models showing certain regional meals, dishes, etc. 5. With parent-teacher association members, plan, prepare, and serve a meal that contains food from a foreign country.
Personal associations, pleasant surroundings, and good manners affect our enjoyment of food.	1. Observe behaviors in the school cafeteria. Discuss why certain behaviors have become accepted as appropriate while others have not. 2. Develop article for school newspaper on cafeteria procedure. 3. Organize, with help of school dietitian a committee to promote the attractiveness of the cafeteria through the use of pictures, table settings, flowers, etc.
Food value may be altered through its preparation and/or processing.	1. Observe the sanitary methods used in the preparation, serving and storage of foods in restaurant or school cafeteria. 2. Visit a milk or food processing plant.

NUTRITION

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Develop situations involving food preparation and investigate them fully. Write reports covering your investigation. Example: What precautions are necessary when purchasing milk from a local farm processing plant as compared with store purchased milk.

NUTRITION

10 - 12

A person's entire well-being is aided by adequate nutrition.	1. Investigate research concerning relationship of nutrition to aging, diabetes, arthritis and heart disease. 2. Discuss what one needs to know to meet the nutritional needs of each family member. What factors change these needs? (age, allergies, activities) 3. Report on saturated fats and cholesterol; point out opinions on relationship to disease. Check food labels to see which products state they have polyunsaturates. 4. List signs a mother might use to indicate she is feeding her family adequately (skin, hair, energy, disease resistance, mental alertness). 5. Discuss influence of nutrition on embryological development.
Weight can be influenced by sociological, physiological and psychological factors.	1. Identify and reproduce various diets; those prescribed medically as well as the fad type crash diet. Compare and contrast these diets and evaluate each on its nutritional value and scientific basis. 2. Discuss reasons for people "crash dieting." 3. Investigate the relationship of heart disease, diabetes, high blood pressure, etc. to overweight.
One's selection of food is determined by a multitude of personal hereditary and environmental conditions.	1. List, discuss and evaluate the factors which influence adolescent eating habits, such as: Home School Personal activities Culture Cost Availability Geographic location 2. Bring in samples of ads for food supplements, nutrition aids and digestive remedies. Evaluate these in the light of their scientific or pseudo-scientific approaches.
Modern methods of processing while altering food value under certain conditions, also provides the consumer with greater varieties of food.	1. Compare and contrast the values of the following processes for preserving foods: Frozen Canned Dried Smoked Marinated

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Develop reports on food additives and the various purposes for which they are used. 3. Investigate the historical significance of food processing. Report your investigation to the class. 4. Collect and evaluate magazine and newspaper articles dealing with additives, pesticides and radioactive fallout in/on foods.
Nutritional problems may affect international relations.	1. Discuss how wars and political skirmishes have been directly related to a food problem. Study food habits and problems of other countries such as India, Latin America, Africa, and the relationship of nutrition to political and economic prpblems.

NUTRITION

GRADE 13

Persons of all ages have need for the same nutrients, but in varying amounts.	1. Arrange committees to research and report on the following as they relate to dietary needs. a) pre-natal and post-natal dietary needs. b) care of the diabetic. c) treatment of TB patient. d) therapy of the alcoholic. e) treatment of cardiac cases. f) nutrition and mental health. g) child's diet and nutrition. h) teenager's diet and nutrition. i) adult nutrition.
The individual has the primary responsibility for his personal health.	1. Evaluate claims made by health food companies for such "miracle" nutrients as carrot juice, ocean kelp, etc. 2. Discuss and evaluate common assertions made about certain foods such as brain food, raw foods, nerve foods, natural foods, etc. 3. Investigate and report on studies dealing with the values of breakfast. 4. Determine the agencies that can be of use in helping evaluate nutrition information, health products and services, e.g. Better Business Bureau, Professional Groups, Government Agencies, etc.
The quantity of food intake is a growing health problem.	1. Discuss basal metabolism and its influence on how the body utilizes nutrients. 2. Compare and evaluate means of losing weight. 3. Evaluate the effect which overweight and obesity can have on an individual's health. 4. Compare and contrast the differences between underweight and malnutrition and compare the seriousness of the two conditions. 5. Investigate and discuss the significance of malnutrition in the world today.

NUTRITION

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Foods may contain substances that are harmful to our bodies.	1. Investigate the ways that certain diseases are transported by foods. Discuss methods of discouraging this kind of transference. 2. Compile a list of foods that are naturally harmful or poisonous to humans.
Safe and hygenic practices during food production preparation and processing can help assure consumers of palatable and uncontaminated food.	1. Determine the reasons why the Federal Government has set up certain agencies to help standardize food processing and storing, e.g. FDA, FTC, Dept. of Agriculture, Public Health Service, etc. 2. Investigate some of the controls put on farmers in the production of food, such as soil preparation, insecticides, animal diets, etc.

NUTRITION

Selected references and resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Medical Association, 535 Dearborn Street, Chicago, Illinois 60610
2. Pennsylvania Department of Education, Bureau of Vocational, Technical and Continuing Education, Instructional Consultation Division, Home Economics, Box 911, Harrisburg, Pennsylvania 17126
3. Pennsylvania Heart Association, 2743 North Front Street, Harrisburg, Pennsylvania 17110
4. Willgoose, Carl E., *Health Education in the Elementary School.* (Philadelphia: W.B. Saunders Company, 1969. Chapter 11).
5. U. S. Department of Health, Education and Welfare, Consumer Protection and Health Service, Food and Drug Administration. Washington, D. C. 20204

PHYSICAL FITNESS

Rationale for Unit:

Evidence is mounting that physically fit persons lead longer lives, have better performance records, and participate more fully in life than those who are unfit. A noted physician has defined physical fitness as "a quality which enhances all other human qualities." Our presidents have endorsed physical fitness over the past decade saying it is, "a matter of fundamental importance to individual well-being and to the progress and security of our Nation," and that it is, "the basis for all other forms of excellence."

A study of a group of fitness award winners in a large high school system showed that they made better grades, missed fewer classes, participated in more activities and had fewer emotional problems than those other members of the student bodies. Physical fitness is well established today as an essential quality for anyone desiring to make the most of himself and life.

The problem existing today is that ordinary tasks of daily living no longer provide enough vigorous exercise to develop and maintain good muscle tone or cardiovascular and respiratory fitness. Machines now supply the "muscle power" in the homes, factories, and farms. They have all but eliminated the necessity for walking and climbing stairs, and one of them—the television set—holds our school children in captive idleness for approximately 21 hours a week. Although today's youth are fundamentally healthier than the youth of any previous generation, the majority have not developed strong agile bodies. The softening process of our civilization continues to carry on its present erosion.

Since it is impossible to achieve physical fitness without good health, our schools must continue to emphasize and improve school health programs.

Every boy and girl can be helped to achieve and maintain lasting fitness through sound programs of health education and physical education, based on developmental activities. These include sports and recreation in the elementary, junior, and senior high schools and college. An effective school program provides basic instruction in vigorous activities and opportunity for participation by all students, regardless of age, sex, and physical ability. It should also provide intramural and interschool sports competition at appropriate grade levels as well as opportunities for participation in varied forms of recreation.

The school health education program must accept the commitment to provide knowledge and understanding based on scientific facts and principles in order to develop desirable health attitudes and behavior for the promotion of physical fitness. While the physical education program also shares a major responsibility for the promotion of physical fitness, a cooperative approach is encouraged. Such an approach can, it seems, be more thorough, dynamic and effective in demonstrating the relatedness of sound health practices, knowledge and attitudes to personal physical fitness.

Success comes only when the student chooses to participate in school sports and activity programs, and when later as an adult, he participates in vigorous recreational programs. Each individual should learn to enjoy taking part in vigorous excercise appropriate to his age and general ability and interest.

This unit correlates well with the units on Alcohol, Anatomy, Nutrition, Physiology, and Smoking.

Basic Concept:

Physical fitness is well established today as an essential quality for anyone desiring to develop his potential to its fullest and meaningfully contribute to the society in which he lives.

Suggested Pupil Outcomes:

1. Demonstrate a knowledge of the effects and benefits of physical exercise and activities on the human body.
2. Demonstrate a knowledge of the skeletal and muscular systems and their relationship to body movement and posture.
3. Identify the relationship of diet, posture, and personal health habits to physical fitness.
4. Conclude the need for balance among purposeful activity, relaxation, rest and sleep.
5. Conclude the need for wholesome physical activity as a necessary factor for total person development.
6. Demonstrate a knowledge of total physical fitness by developing in writing a personal program of fitness and showing evidence of regular participation in the program.

PHYSICAL FITNESS

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Exercise and play contribute to personal happiness, growth, strength, relief of fatigue, and making friends.	1. Discuss how regular exercise and play help our bodies to develop. 2. Write or draw pictures about favorite ways to exercise. Integrate with an art class project. 3. Examine sports pictures and relate the types of exercise portrayed. 4. Discuss the kinds of outdoor activities participated in at school and at home and what they contribute to health.
There are suitable times for exercise and play.	1. Discuss the opportunities for play and exercise at school, home and community. 2. Survey the class concerning the number of hours that are used for physical activity in a day. Make a list of the variety of activities involved.
Suitable conditions are necessary for play activity.	1. Discuss with students the need for safety during play; at recess, before and after school and at home. 2. Discuss reasons for playing outside when possible.
Daily exercise strengthens the heart and increases the effectiveness of the lungs.	1. Invite the physical education teacher to discuss and demonstrate the importance and need for play and exercise in maintaining and developing personal physical fitness.
Sleep, rest and proper food is important for tomorrow's exercise and play.	1. Dramatize what happens when pupils do not get enough sleep. 2. Discuss relaxing activities that may be engaged in before going to bed. 3. Explain why rest is important and needed regularly.
Good sportsmanship adds to the enjoyment of play activities.	1. Provide examples through role-play to illustrate good sportsmanship in play activities. 2. Demonstrate good sportsmanship - recess periods, lunch times, and other school social activities.

PHYSICAL FITNESS

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Physical fitness contributes to good health.	1. Establish a definition of physical fitness inclusive of its varied components and congruent with student understanding. 2. Investigate the emphasis given to physical fitness in ancient Greece, Rome, and Egypt. 3. Explore the training schedule of professional athletes in various sports.
Physical fitness includes health practices other than exercise.	1. Explore the health practices necessary for good physical fitness. a) correction of defects b) avoidance of injury and disease c) proper nutrition d) proper habits of sleep and rest 2. Illustrate how the use of alcohol and tobacco may interfere with the full attainment of physical fitness.

PHYSICAL FITNESS

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
There is an important relationship of the function of bones and muscles to movement and posture.	1. Review anatomy unit. 2. Use skeletons and anatomical charts to demonstrate the relationships of the skeletal system to posture and exercise. 3. Make bulletin board display illustrating how the muscles move the body and affect posture. 4. Relate posture to common occupations. 5. Observe each other's posture and thereby help one another to be more aware of good posture.
Exercise contributes to the efficient functioning of the body.	1. Illustrate how muscles develop in size, strength, and efficiency. 2. Demonstrate the effect of exercise on the heart, circulation, and respiration. 3. Demonstrate the effects of exercise on digestion, assimilation and elimination. 4. Invite the physical education teacher to class to discuss and demonstrate good body mechanics. 5. Demonstrate correct techniques of moving, lifting, and carrying heavy objects. 6. Illustrate how fatigue can contribute to poor physical performance and posture.
Participation in a variety of physical activities helps to promote development of body symmetry.	1. Make a list of physical activities you participate in and determine if all parts of the body are being developed. 2. Develop a list of the kinds of activities in which pupils participate. Evaluate each activity for its contribution to one's physical fitness.
Social, mental and environmental values may be derived from participation in a variety of physical activities.	1. Write an essay on "My favorite sport." Comment on the values received from participation in physical activities. 2. List and discuss the lessons learned in playing team and individual sports. 3. Illustrate how physical exertion can help you in "letting off steam" or reducing emotional tension.
Conditioning activities serve to prevent injuries in sports.	1. Discuss the value of warm-up before strenuous activities. 2. Invite a school coach to speak on proper training practices designed to avoid strain, sprains and fractures.

PHYSICAL FITNESS

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Physical fitness is but one aspect of fitness, yet fundamental to total fitness.	1. Discuss how the difficulties in one dimension of fitness may interfere with the full development of fitness in another dimension. 2. Illustrate the functional and organic aspects of fitness. 3. List and discuss the benefits of developing and maintaining an adequate level of physical fitness. 4. Panel Discussion: Fitness for What?

PHYSICAL FITNESS

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The working together of the skeletal and muscular systems make it possible for maintaining differences in posture and movement.	1. Through charts illustrate how the framework of the body relates to the muscular system and body movement. 2. Using the skeletal system illustrate a relationship of joint actions to body movement in man.
Vigorous physical activity increases the efficiency of the cardio-respiratory system.	1. Review the psychology of the heart and respiratory system. 2. Report on the effects of moderate and vigorous exercise on the cardio-vascular system. Consider: a) size of heart b) efficiency of heart c) contraction rate d) recovery e) air intake 3. Panel discussion: "Is exercise essential to physical fitness?" 4. Observe and measure the pulse rate and blood pressure of students before, during, and after exercise. Compare and analyze the individual differences. Use an appropriate film to illustrate the circulation of blood through the body.
Participation in sports is fun and good exercise, but also gives one an opportunity for self-evaluation.	1. Conduct a self-evaluation considering personal improvement and peer status in relation to: a) skills b) coordination c) strength d) speed e) endurance f) teamwork g) sportsmanship 2. Complete the AAHPER Physical Fitness Test and rate yourself according to national norms.
Proper nutrition is necessary for the body to function at its best.	1. Investigate the effects of regular exercise on the functioning of the digestive system. 2. Discuss the role of exercise in weight reduction. 3. List some current food fads and their effects on the body.
There must be adequate recreation and rest to refresh the body and mind each day.	1. Develop panel discussion on: "A vigorous workout refreshes the body". 2. Have students list their hobbies and how they affect one's total health. 3. List the types of recreational activities which tend to be relaxing to the body. Evaluate those which you personally engage in. 4. Investigate the relationship between sleep requirements and physical activity.
Sedentary practices of modern living reduce the effectiveness of body functions.	1. Relate the effects of spectator sports, modern transportation, and television on society. 2. Discuss: "The Soft American."

PHYSICAL FITNESS

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Investigate the importance of muscular strength in forestalling fatigue.

PHYSICAL FITNESS

10 - 12

Regular physical activity is necessary to attain fitness.	1. Review the meaning of physical fitness considering: a) ability to pass a fitness test b) meet the demand of life 2. Discuss the two basic aspects of physical fitness. a) medical fitness b) dynamic fitness (action capacity). 3. Discuss reasons why exercise and physical fitness is necessary even when the physical demands of society are minimal.
Modern society places new demands upon the physical fitness of individuals.	1. Discuss the need for physical fitness: a) to retard the aging process b) to enjoy leisure time c) to maintain posture d) to work efficiently and meet the daily demands of life e) to cope with modern technology's reduction of physical exertion
Regular and reasonable physical activity is essential to the improvement and maintenance of physical capacities.	1. Research and report on the criteria to be used in determining how much daily exercise one should experience. Consider: a) age b) results of medical examination c) general reaction to and recovery from physical activity d) aerobics program (2) 2. List the various seasonal sports and their contribution to physical fitness, e.g.: a) team sports b) individual sports c) rythmics d) combative activities e) water sports f) outdoor sports g) jogging 3. Develop a personal year-around exercise and activity program. 4. Investigate the role of exercise in weight reduction. 5. Guest Speaker: Invite a cardiologist to speak on the role of exercise in delaying physiological aging. 6. Explore the following conditions as they relate to selection and participation in physical activities. a) physical examination b) factors used in selecting a sport

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	c) necessary training d) equipment e) safety factors f) availability of facilities
	7. Discuss the topic: "Exercise is desirable at any age."
Adequate muscular activity is necessary for meeting the daily challenges of life.	1. Review the physiology of the muscular, skeletal and sensory systems as they relate to fitness. 2. Have a qualified coach speak on the use of the overload principle used in developing strength. a) weight lifting b) weight training c) isometric exercise d) isotonic exercise
	3. Research and report on the following aspects of strength developing techniques. a) overload b) repetition c) interval d) practice schedule e) warm-up f) equipment and devices to be used g) safety
	4. Project: Develop committees to set up strength developing programs related to specific sports or activities of personal interest. 5. List and discuss the benefits of muscular fitness. 6. Survey the frequency and kinds of exercise that adults undertake. Evaluate methods of maintaining fitness into adult years.
Cardio-respiratory efficiency is necessary for active life.	1. Review the physiology of the respiratory system. 2. Investigate the benefits of cardio-respiratory efficiency. 3. Research and report on the training methods and activities used to develop cardio-vascular efficiency. a) circuit training b) interval training c) overload principle
	4. Identify the sports and activities participated in at school and determine the degree to which each of these activities contributes to cardio-respiratory fitness.
Sleep, rest, and relaxation are important in maintaining physical fitness.	1. Discuss and report on: a) Beneficial Effects of Sleep b) Degrees of Sleep c) Conditions Necessary for Sleep d) Sleep and Energy Build-up e) How Much Sleep is Necessary?

PHYSICAL FITNESS

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Discuss the various types of fatigue: a) physical b) mental c) chronic 3. Investigate the various methods and their effects that may be used to delay the onset of fatigue. 4. Demonstrate the relationship of exercise to posture.
School and community recreation programs offer a variety of physical activities.	1. List and discuss the sports and recreational opportunities offered in school and communities. 2. Have students evaluate the use of their leisure time. What percentage of this time is used for physical activities?
The nation is concerned with the fitness of its youth.	1. Investigate the purpose and activities of the President's Council on Fitness and Sports. 2. Examine the rejection rate of young men ruled unfit for military service during any conflict in which our country has been engaged. 3. Discuss the importance of physical fitness in terms of national defense. 4. Compare the fitness of American youth with that of European countries.
Physical fitness tests have been developed to show how well a person performs physical tasks; how well individuals are prepared for emergencies, as well as for daily living.	1. Evaluate various physical fitness tests and the degree to which each reflects one's physical fitness. a) Krauss-Weber test b) President's Council on Physical Fitness and Sports c) The United States Marine Corps Physical Fitness Test d) AAHPER Physical Fitness Test 2. Examine the components of physical fitness tests. a) muscular strength b) muscular endurance c) muscular power d) cardio-vascular endurance e) speed, agility f) coordination g) flexibility 3. Evaluate your school physical education program in terms of: a) continuing health appraisals for all students b) screening tests to identify the physically underdeveloped student c) corrective programs d) vigorous daily physical exercise for all students in a physical education class e) periodic physical achievement tests

PHYSICAL FITNESS

GRADE 13

Physical fitness is founded on good health and regular physical activity.	1. Review the components of physical fitness.

PHYSICAL FITNESS

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Discuss the benefits of regular exercise, consider: a) economy of movement b) poise and grace c) muscle development d) weight control e) preventing degenerative diseases—longevity f) relief from tension and chronic fatigue g) protection against accidents and emergencies
	3. Discuss: "We are to a large extent what our muscles make us—weak or strong, vigorous or lethargic."
Appropriate exercise strengthens the heart.	1. Research and report on the effects of running and vigorous exercise on the following: a) lowering cholesterol levels b) reducing heart attack rates c) recovery of heart attack victims d) strengthening the heart e) oxygen economy of the heart
	2. Evaluate the effectiveness of the following programs: a) swimming b) walking c) cycling d) jogging e) games and sports
	3. Research and report on the training activities used to develop cardio-vascular fitness such as: a) interval training b) circuit training c) overload techniques
	4. Have a physiologist speak on the use of the overload principle in developing strength. a) isometric and isotonic exercise b) weight training c) weight lifting d) combination of isometric and isotonic exercise
	5. Project: Set up a strength developing program related to a sport or activity in which the student is participating. Consider practice schedule, overload, repetition, warm-up equipment devices to be used, and safety.
	6. Investigate the following statements concerning exercise and physical fitness. a) exercise causes heart trouble b) as you grow older you should exercise less c) deep breathing, yoga, or daily dozens alone will be enough to increase your physical fitness d) playing games will build fitness e) it is unfeminine for a woman to exercise f) exercise alone will not cause weight loss

PHYSICAL FITNESS

GRADE 13

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Fatigue in many people, is the result of gradual deterioration of the body from lack of enough physical activity.	1. Discuss the causes and treatment for: a) muscular fatigue b) phychological fatigue c) chronic fatigue d) nerve cell fatigue
Regular exercise can help to slow down physical deterioration that accompanies aging.	1. Research and report on the role of exercise in prolonging your active years. 2. Project: Develop a seasonal program to maintain and develop personal physical fitness. Consider warm-up exercises, conditioning exercises, circulatory exercises, and progress evaluation. 3. Project: Develop a seasonal program to maintain and develop physical fitness for a 50 year old man or woman. 4. Evaluate the Adult Physical Fitness Program prepared by the President's Council on Fitness and Sports. 5. Invite a member of the Armed Forces to discuss the military fitness program.
Inactivity is one of the most important factors in explaining the problem of overweight in modern Western society.	1. Report on the effectiveness of *proper exercise* and *reasonable diet* in weight reduction when supervised by a physician. 2. Develop a panel discussion around: "Why diet and exercise fads won't turn your fatness into fitness." 3. Discuss the fallacies of diet fads. 4. Report on the effectiveness and safety of the following in reducing body weight: 5. Contrast the fat content of the American diet and cardiovascular disease with that of other nations.

PHYSICAL FITNESS

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Association for Health, Physical Education and Recreation, 1201 16th Street, N.W., Washington, D.C. 20036
2. Cooper, Kenneth, *Aerobics*. (Philadelphia: J.B. Lippincott Company, 1968).
3. Morehouse, Laurence E. and Augustus T. Miller, *Physiology of Exercise*. (St. Louis: C.V. Mosby Company, 1967).
4. Pennsylvania Heart Association, 2743 North Front Street, Harrisburg, Pennsylvania 17110
5. President's Council on Physical Fitness and Sports, 330 C Street S.W., Washington, D.C. 20201
6. Unites States Marine Corps Physical Fitness Program, Inspector Instructor, Marine Reserve Training Center, 2991 North Second Street, Harrisburg, Pennsylvania 17126

PHYSIOLOGY

Rationale for Unit:

Physiology opens a world of discovery in the amazing interactions of body systems under both normal conditions and those of stress. Familiarity with the dynamics of body systems is part requisite for maintaining total health.

Hopefully, an intelligent understanding of the human body and how it functions will lead to the desire to achieve and to maintain the highest possible degree of physical and mental health. While knowledge of body structure and function is important, we must be careful that the information presented is not sterile in and of itself. It is one aspect and an important one to present the systems, their component parts and label each area correctly. However, that same information becomes meaningful and relevant to the learner only when he is helped to relate it to his life functions and needs, now and in his future years. This is the ultimate challenge to every health educator, to help learners to associate health information to their real world of needs, interests, emotions and feelings.

The contents of the unit can readily be integrated with other areas of study aside from health which will be valuable in insuring assimilation of factual material. The innovative teacher will not limit himself to suggested activities but go beyond and create original learning situations. Investigation of body functions may involve the library, the laboratory and field ventures to local hospital and clinics. Visual aids should not be overlooked. The Visible Man and Woman, human models of specific organs and systems may be used effectively. Transparencies, slides and films serve to visualize a program that may lose some of its meaning and fascination by the mere classical and technical textbook approach.

This unit may be combined, in part, with units on anatomy, disease control, human sexuality, consumer education, nutrition, and drugs and narcotics.

Basic Concept:

Good health involves the integrated functioning of mind and body and can only be fully achieved through knowledge and application of sound physiological principles.

Suggested Pupil Outcomes:

1. Demonstrate knowledge of the structure and function of body systems and their relation to the total function of the body.
2. Identify and interpret conditions that are or may be detrimental to normal body functions.
3. Describe and evaluate individual differences as they relate to the structure and function of the human body.
4. Demonstrate ability to evaluate basic medical information related to the care and maintenance of the human body.

PHYSIOLOGY

K - 3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The human body is often referred to as a machine.	1. Make comparisons with any mechanical device and note the need to keep each part in sound working order, illustrate how damage to the entire mechanism occurs if an individual part is damaged.
A human being is a complex network of body cells, tissues and organs all working together.	1. Demonstrate by picture, drawing, or other visual aids all the body systems. 2. Develop the body systems when possible comparing them to experiences the child can relate to, such as: Nervous system - telephone network Circulatory system - community water system 3. Prepare bulletin board displays of body systems.
The heart is a very special part of our body.	1. Illustrate the basic mechanics of a pump and demonstrate its similarity to the human heart. 2. Bring a stethoscope to class and illustrate how a doctor uses it.

PHYSIOLOGY

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Various organs and tissues work together to form body systems.	1. Make liberal use of models, charts, and other varied visual aids in discussion sessions concerning body systems. Utilize every available visual resource, such as pictures, wall charts, and transparencies, to become familiar with the basic systems. 2. Form small study groups to compare and contrast different body systems and develop reports, written, oral, or visual to the class.
The respiratory system brings oxygen to the body and removes CO_2.	1. Construct and label a chart of the respiratory system and summarize the functions of various parts. 2. Demonstrate artificial respiration procedures.
The digestive system changes food into usable form for the body cells.	1. Construct and label a chart of the digestive system. 2. Review unit on nutrition.
The Circulatory System transports supplies such as food and oxygen and waste products throughout the body.	1. Construct and label diagrams of the heart and blood vessels. 2. Examine a model of a heart. 3. Demonstrate how to take a pulse rate and count the beats. 4. Demonstrate and compare heart rates before and after participation in different activities.
The nervous system is like a telephone exchange which receives, interprets and and transmits messages.	1. Use visual aids or charts to examine the brain and spinal cord and outline their functions. 2. Demonstrate why damage to the spinal cord may cause paralysis. 3. Do *taste* experiments blindfolded and compare foods of similar consistency such as apples or potatoes, different types of soda. 4. Stress eye and ear care. 5. Show and study a diagram of the reflex arc.

PHYSIOLOGY

4 - 6

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The endocrine system is the chemical regulator of the body.	1. Describe and show the location of the endocrine or ductless glands. Explain how its secretions are passed directly into the blood. 2. Define and discuss hormones. 3. Introduce the several endocrine glands. Pituitary Thyroid Parathyroid Adrenal Gonads
The reproductive system provides the cells for producing a new person and a place for the embryo to grow until it is complete enough to survive on its own.	1. Refer to Human Sexuality Unit.
The excretory system takes care of the elimination of waste, liquids, solids, and gases.	1. Trace oxygen, a solid food, or a liquid through the body until used or eliminated. 2. Describe the independence of the excretory system to other systems. 3. Stress individual differences in elimination habits. 4. Discuss use and misuse of laxatives.
The soundness of the various systems can be interferred with by injuries and/or disease.	1. Discuss the ability to transplant certain body organs. 2. Report on childhood disease: causes, symptoms, treatment, prevention. Present material in skits or panels.

PHYSIOLOGY

7 - 9

Many organs combine to form support and regulate the systems of the body.	1. Examine a model of the human torso equipped with movable parts. 2. Construct a chart and in tabular form list the major organs, the system it supports, and the life function it performs. 3. Select one system for research and study. Make a report orally or written.
The effectiveness of each body system is interdependent upon the stability and/or function of every other system.	1. Illustrate how the loss or malfunction of one system may affect other systems. 2. Use animals to demonstrate effect of dietary deficiencies and oxygen debt. 3. Investigate the interdependency of the respiratory and cardiovascular systems. 4. Discuss blood types and transfusions. 5. Examine in detail the Rh factor. Refer to its relationship in reproduction.

PHYSIOLOGY

7 - 9

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The endocrine system supports the delicate hormone balance necessary for normal body function.	1. Review the various endocrine glands, their function and location. 2. Discuss results of malfunctioning glands. 3. Investigate recent research on hormone production. 4. Develop a chart showing: Gland / Location / Hormones Produced
The nervous system is the control center for human action (voluntary and involuntary) and sensation.	1. Demonstrate and explore reflex actions. 2. Explore the stimulus-response phenomenon. 3. Examine the function of the central nervous system. 4. Examine the function of the autonomic system. 5. Investigate the development of a conditioned reflex.

PHYSIOLOGY

10 - 12

All cells perform similar basic functions.	1. Identify cellular functions such as: a) metabolism b) circulation c) assimilation d) respiration e) excretion f) secretion g) locomotion h) reproduction 2. Examine and demonstrate the process of mitosis, osmosis, diffusion and food oxidation.
The cooperative action of many systems results in interaction to compensate for the complete or partial loss of any system or part thereof.	1. Discuss open heart surgery examining the body's reaction to a foreign substance. 2. Evaluate the removal of one lung or one kidney or a portion of the stomach and intestine and the resultant body compensations.
The systems of the body are complementary to one another.	1. Prepare a paper on the *intersystem* activity of certain organs, such as: a) pancreas b) liver c) heart 2. Report on "Body efficiency versus man-made structures." a) computers vs. human brain b) organs vs. artificial organs
The well-being of the respiratory system is a basic *must* for good health.	1. Discuss material from other units on: Smoking, Health, Community Health, Disease. 2. Report on hyperventilation and vital capacity; relate specifically to sports. 3. Discuss exercise for cardio-vascular fitness.

PHYSIOLOGY

10 - 12

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The endocrine system performs an ever increasing and vital function in the human body.	1. Investigate commercially prepared hormone creams and medications. 2. Invite a physician to discuss modern advances in endocrinology.
Progress in scientific technology contributes positively to man's welfare, but it also includes negative influences which must be evaluated.	1. Have a panel discussion exploring the physiological implications related to: Radiation, Drugs, Space Travel, Pollution, and Oceanography. 2. Discuss food-fallacies and patented medicines. 3. Refer to Consumer Health Unit. 4. Relate to the statement, "America is a *pill* society."

PHYSIOLOGY

GRADE 13

The basic unit of the nervous system is the neuron.	1. Describe and illustrate three types of neurons and their interrelationship: a) sensory b) central c) motor 2. Describe a *nerve impulse*. Discuss various types of stimuli causing differentiation, such as nerve impulses.
The brain is composed of several different parts. Each part works closely with other parts, but performs different activities.	1. Define and illustrate the structure and function of the following: Cerebrum: a. receives sensory impressions b. acts as a center of voluntary motor impulses c. contains speech centers d. acts as center of emotions, consciousness, memory, thought, association, intelligence, learning e. directs voluntary acts Cerebellum: a. maintains balance by coordinating impulses from the semicircular canals, body wall, and cerebrum. Midbrain: a. acts as a center of interconnection of fibers from cerebrum and cerebellum. Pons: a. connects fibers from the 2 hemispheres of the cerebrum. b. serves as a bridge for fibers running from cerebrum to medulla and spinal cord. Medulla: a. receives fibers from upper brain regions and spinal cord. b. originates impulses which regulate heart action, dilation and construction of artery walls, and breathing movements.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	Spinal Cord: a. is junction of sensory and motor nerves. b. acts as center of simple reflex actions in trunk and limbs. c. contains nerve fibers to and from brain region. 2. Define and illustrate by diagram: a) ventricles b) convolutions c) lobes d) cortex 3. Secure a specimen or visit a lab where brain tissue, either in whole or part may be examined. 4. Conduct a research report on why a basal skull fracture damaging the medulla is usually fatal. 5. Discuss the check and balance system involved in the control of body functions by the sympathetic and para-sympathetic nervous system.
Any conditions which impair, damage, or destroy nerve tissue is classified as organic.	1. Report on one of the following: a) Mental deficiency or arrested mental development b) circulation failure c) tumors, both malignant and benign d) infections, caused by viruses, bacteria, and other micro-organisms e) injuries, including birth injuries f) central nervous system diseases or unknown cause g) inflammation of nerve fibers
Epilepsy, strokes, tumors, senility and syphilis all affect the nervous system.	1. Investigate the cause, treatment and prognosis of tumors and strokes. 2. Visit a clinic to observe an electroencephalograph and/or an electrocardiograph.
The endocrine or ductless glands secrete hormones or body regulators directly into the blood stream.	1. Review the names and location of endocrine glands. 2. Research available data on the use of hormones and hormone supplements. 3. Research the uses of: a) Thyroid hormone b) Insulin c) Estrogen d) Progesterone
Fatigue can be attributable to mental, physical or emotional exertion.	1. Discuss normal, healthy fatigue and the sensible handling of it on a routine basis. 2. Research: Oxygen debt, Anemia, Tension, Low Blood Sugar, Mental Fatigue and Insomnia. 3. Discuss what happens to the body during sleep and the factors causing dreams. 4. Examine the relationship that exists between fatigue, sleep and relaxation.

PHYSIOLOGY

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. Best, Charles H. and N. B. Taylor, *Human Body: Its Anatomy and Physiology*. (New York: Holt, Rinehart and Winston, Inc., 1963).
2. Hirsch, S. Carl, *Four Score ... and More: The Life Span of Man*. (Dayton, Ohio: The Viking Press, 1965).
3. Kahn, Fritz, *The Human Body*. (New York: Random House, 1965).
4. Thompson, C. W., *Manual of Structural Kinesiology*, 6th Edition (Mankato State College, Mankato, Minnesota, 1969).

SAFETY

Rationale for Unit:

When a school has no accident for the school year, it is not an accident, but it is the result of a good safety program. Accidents, both at home and at school, are all too high. The automobile, adding to other ha[illegible] of modern living, has made accidents the leading cause of death among children and youth. Accident rates can and have been reduced. Myths such as "accidents just happen" only serve to stand in the way of diminishing pain and suffering.

Knowledge about what one is doing whether it is how to do something or the limitations of an action or equipment, enters into accident prevention. Attitudes, some of which are not obvious, guide behavior and lead one into or away from a hazardous situation.

Leadership for safety education must originate within the school through direct and indirect experiences. Indirect experiences come through living in a safe environment, both at work and in play. Direct experiences come through class instruction in safety and participation in student safety organizations. Many non-school agencies can use their resources to enrich the overall program. The Fire Department, the Traffic Division of the Police Department, insurance companies and industrial safety engineers can all contribute to the basic school safety program. Our environment, at school, in the home and in the community must be made as safe as possible through a planned program of safety education. An annual safety week program is not enough, as habits, skills and desirable attitudes develop slowly. The challenge to the teacher is to provide experiences that will be both meaningful and relevant. Accidents can be prevented and every effort must be made to promote this concept.

Some of the understandings in this unit will correlate well with the units in Community Health, Consumer Health, Mental Health, Smoking, Drugs and Narcotics and Physical Fitness.

Basic Concepts:

Safe living involves the development and use of safety precautions while recognizing the inevitability and appeal of risk taking.

Natural and man-made environmental factors influence health and safety.

Some environmental conditions can be modified and controlled.

Suggested Pupil Outcomes:

1. Conclude that reasonable safety precautions in daily living are necessary and demonstrates responsibility for applying them in known hazardous situations.
2. Develops criteria for a safe environment.
3. Evaluates potential risks and demonstrates sound judgement in avoiding or coping with them.
4. Accepts the fact that some accidents are unavoidable. Demonstrates a knowledge of how safe behavior can reduce the possibility of accidents, injury or death.
5. Conclude that accidents are caused by human and environmental factors and may result in injury, property damage and/or death.
6. Conclude that while natural and man-made environmental factors influence one's health and safety, man has the knowledge and ability to control or modify many of these factors.

SAFETY

K-3

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The responsibility for safe conduct to and from school is shared by the home, community and the school.	1. Learn the name and location of your school. 2. Draw a map filling in the safest route to school and discuss with parents. 3. Practice with a school patrol member where, when, and how streets should be crossed. 4. Prepare a list of safety rules for use when riding the school bus. Dramatize by arranging chairs to represent school bus. Show correct way of boarding, riding, leaving, and crossing in front of bus. Include emergency evacuation procedures. 5. Make posters of school bus rules; street signs; how to cross streets correctly. 6. Discuss the responsibilities of the policeman at school crossings. 7. If the community has a Block Parent Program, discuss its purpose with each child. Have him identify the Block Homes located on his route to and from school.
The community helps in keeping areas safe for pedestrians.	1. Walk around the school neighborhood and discover various kinds of traffic signs. 2. Discuss safety problems encountered while going to and from school. Include the meaning of safety signs—danger, stop, slow, school, railroad, etc. 3. Make traffic signal box (milk carton covered with paper with appropriate colors). Mount on a stick and play traffic games.
While walking it is very important to stay alert.	1. Set up traffic situations and illustrate rules for pedestrians. Invite a policeman to visit class to help with discussion. 2. Make list or booklet of animals they may encounter on way to school; how and when they could be dangerous, and what to do if bitten. 3. Discuss why pupils should not talk to strangers or accept anything from them. 4. Establish rules of what they should do when approached by strangers. 5. Draw or mark off a street on classroom floor, use toy cars to demonstrate dangers of walking out between parked cars, stepping off curbs without looking and turning cars, especially righthand turns. 6. Make posters showing dangers of jay-walking. 7. Darken room and have pupils dressed in various colored clothing, walk in front of room. Be sure to have one pupil wear white. Discuss which colors are more easily seen and the correct way to walk along streets or highways that do not have sidewalks.
Safety and accident prevention is everyone's concern.	1. Invite a fireman to explain why we have fire drills. Have actual practice of both fire and civil defense drills with children in various locations such as class, lunchroom and lavoratories. Correlate with national fire prevention week. Demonstrate how to extinguish burning clothing. 2. Schedule visit to fire station with fire marshal.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Interview policeman, nurse, bus driver, parents, school patrol members, etc. about their responsibilities in home, community and school safety. 4. Invite the head of the physical education department to discuss and demonstrate safety on the playground and in the gymnasium. 5. Visit nurse's office to discover how school injuries are cared for. 6. Dramatize the "lost child game" while one child is lost and another is the policeman. Have child review home address, telephone number, and name. Practice the use of the phone.
Play can be more fun if it is controlled.	1. Demonstrate how to use slides, swings, teeter-totters, and other equipment found not only on the school playground, but throughout the community. 2. Demonstrate with children on the playground the typical safe play situations and those containing common accident hazards. 3. Emphasize running and falling hazards. 4. Assist children in planning safe games for playground use. 5. Through role-play situations demonstrate the proper and safe use of equipment and materials such as scissors, tricycle, blocks, wagon, lunch trays, etc. 6. Demonstrate and practice bicycle safety for both riders and pedestrians.
Courtesy and conduct are important to good school safety.	1. Make charts showing how *left* and *right* change as direction changes; correlate it to behavior in halls and on stairs. 2. Demonstrate how to walk up and down stairs, one step at a time; open doors; control rate of walking, go around corners, stay to the right, etc. Interpret WHY such precautions are necessary. 3. Demonstrate safe practices for entering and leaving the building so as to avoid pushing, shoving, and tripping. 4. Demonstrate conduct and courtesy in use of drinking fountain, lavatory, cafeteria, playground and classroom.
Sharing safety knowledge can help others to prevent accidents.	1. Plan with the art instructor to draw or paint safety posters and illustrations. 2. Make a safety scrapbook with children's drawings and/or pictures cut out of magazines or newspapers. 3. Make puppets and conduct a puppet show on "Safety." 4. Put on a dramatic play showing safe way of doing things. Invite other classes or parents to come. 5. Make bulletin board displays on safety in the school. 6. Make up safety riddles or rules pertaining to school objects such as pencils, pens, scissors, etc.
Safety and courtesy practiced away from school can help prevent accidents in play activities.	1. Make a display of toys or small play equipment which can be dangerous if not correctly used, e.g. marbles, hard balls, jump ropes, sling shots, BB guns, dart games, bows and arrows, etc. Discuss why such equipment may be dangerous. 2. Discuss taking turns.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Dramatize what to do if a ball rolls into a street.
	4. Discuss the safe places and ways for using a kite and what material should or should not be attached to a kite.
	5. Draw and discuss pictures of places or things to avoid during play, e.g. R.R. tracks, bridges, refrigerators, plastic bags, caves. Emphasize the reason why such things or places are dangerous.
	6. Demonstrate care or minor injuries.
	7. Demonstrate and discuss the importance of putting scissors, needles, and other sharp tools safely away after use.
	8. Discuss the community and safe places for play and recreation.
	9. Discuss water and boat safety.
Practice and preparation can save our lives in hazardous situations relating to fire.	1. Demonstrate how to act in case of home fire, e.g. getting out of the building, alternate routes, getting brothers and sisters out, getting adult help, calling fire department, etc.
	2. Demonstrate how to roll up in a blanket if your clothing is on fire to smother the flame.
	3. Discuss why an adult should always be present when children are near an open fire.
	4. Demonstrate making a fire extinguisher by putting vinegar in a bottle, adding a small amount of baking soda, which has been wrapped in tissue—put a stopper (rubber) with a pipette in the bottle, turn it upside down, and aim the mixture into a pail or sink.
	5. Demonstrate out-of-doors how to build a fire with wood and matches, demonstrate how to put it out with dirt, sand and water. Show how to light matches. Danger in using kerosene or gasoline to start fire. Such an activity may correlate well with a school's conservation education program.
Falls: A common danger in the home are frequently the result of certain physical factors coupled with carelessness.	1. Demonstrate that a rubber-backed rug will not slip as easily as one that is not rubber-backed.
	2. Discuss and demonstrate why skates, pencils, marbles left on stairs, on floors may result in an accident - a preventable accident.
	3. Demonstrate the difference in slipperiness of a dry and wet basin to show the possible hazards of a tub and shower.
There are harmful substances in certain plants, animals and products of which we should become aware.	1. Make a collection of magazine pictures to be used in a chart depicting household products which may be dangerous; assemble pictures by rooms in a house, bathroom, laundry, etc.
	2. Make a display of plants to avoid. Survey local neighborhood to see how many plants grow in your area.
	3. Discuss poison symbol. Construct cabinet made of heavy paper, place in it drawings of all things that may be poison. Discuss taking medicine.
	4. Make a display of poisonous animals and insects.
An understanding of the potential of electricity is important in establishing a safe household atmosphere.	1. Discuss simple safety rules regarding electric light cords, sockets, and use of small appliances.

SAFETY

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Discuss danger or turning on lights or touching electrical appliances when hands or feet are wet. 3. Discuss electrical storm hazards. 4. Make drawings of every room in house to show people in act of having accident. Demonstrate why the accident is occurring. 5. Make up safety slogans.

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The reinforcement of home and school concepts helps to develop more responsible action and increased knowledge.	1. Investigate and discuss accident statistics and traffic hazards in your community, state and nation. Compare. 2. Discuss bus loading and unloading as well as on-bus conduct. 3. Display a variety of traffic signs; discuss meanings for vehicle and pedestrian traffic safety. 4. Prepare self-test for other grades on pedestrian, bicycle and skate-board traffic safety.
With cycling pleasures comes responsibilities.	1. Have member of local police department explain rules and regulations concerning equipment and operation of a bicycle. 2. Have bicycle inspection at school to determine proper equipment, license and registration. 3. Consult the Department of Education's bicycle safety bulletin. (4). 4. View films relating to bicycle safety. 5. Assist in planning a "bicycle rodeo" on a weekend. PTA, local police or service clubs could work together in the organization, conduct and judging. 6. Keep a record of bicycle accidents and discuss how they could have been prevented. 7. Develop rules for safe biking.
Each person shares a responsibility in prevention of school accidents and the promotion of safety.	1. Discuss practices which will avoid accidents due to these hazards. Make appropriate slogans and posters for display. 2. Draw up a plan of grounds and buildings, pointing out areas considered unsafe. 3. Organize a "clean-up the playground" period to remove hazards, objects. 4. Discuss and list safety rules for equipment used on your school playground and in sports activities. 5. Study and practice the duties of the safety patrol. 6. Develop original plays involving safety rules and precautions. 7. Investigate the community civil defense program and how the school is involved.
Most home accidents can be prevented.	1. Through the assistance of the art instructor make cartoon drawings depicting safety at home.

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	2. Complete a home fire hazard check list and suggest as many corrections as possible.
	3. Collect data on the cause of fires in homes and public buildings.
	4. Invite an electrician or power company representative to discuss electrical hazards in the home with the class.
	5. Experiment with dry cell batteries to determine how electric insulation may be grounded or shorted out.
	6. Correspond with insurance companies to determine the number of home falls and how this rates with other accidents.
	7. Report on causes and results of home accidents that involved relatives or close friends within the last year.
	8. Prepare an exhibit of hazardous objects or materials found in homes such as metal toys with sharp edges, rugs without rubber backing, oily rags improperly stored, and easily accessible poisonous substances.
	9. Develop a comprehensive check list of home hazards and suggested ways for correction.
Fire prevention is part of civic and individual responsibility.	1. Study and practice the *Fire Drill* and civil defense regulations posted in the classroom.
	2. Participate in fire drills. Discuss ways to improve fire drills. Learn the location of fire safety equipment in the building.
	3. Plan and participate in campaigns to eliminate fire hazards in homes and schools.
	4. Identify types of burns and treatment for each.
	5. List all the flammables found in the home and discuss the storage of each.
	6. Develop a list of seasonal fire hazards in your locale and categorize by the season.
	7. Demonstrate the use of as many types of fire extinguishers as you can. Investigate the types of fire for which each one is most effective.
	8. Discover means of personal protection in case of fire. Role play varying situations, e.g. dress on fire, trapped in a smoke filled house, etc.
	9. Visit a fire fighting school.
The safety of others becomes everyone's responsibility.	1. Demonstrate basic first aid practices.
	2. Make list of important telephone numbers for use in emergency at home and school.
	3. Collect newspaper clippings about accidents. Discuss first aid procedures that might have been used in each situation.
	4. Plan and/or develop a first aid kit for home, automobile, camping or hiking. Demonstrate why selected items are vital to the kit.
	5. Describe accidents reported in newspapers and analyze how they might have been prevented. Diagram the accident on the chalk board.
	6. Through role play situations, demonstrate the importance of first aid and basic procedures

CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	7. Demonstrate the proper methods of artificial respiration. Plan for group involvement. Create situations for application. 8. Discuss how, by using improper action, additional damage may be done to an injured person. Investigate the meaning behind the statement: "no action at times is the best action." 9. Discuss pupils' camp experiences in relation to first aid in emergencies. 10. Demonstration of first aid practices by Boy Scouts and Girl Scouts who are qualified in first aid. 11. Prepare a safety and first aid handbook for room and playground use. May involve Art and English classes. 12. Discuss the importance of securing aid in emergencies without leaving the injured person. Develop suggestions as to how this may be done.
Safe participation in sports and recreational activities requires the application of safety practices, knowledge and rules.	1. Discuss the following in relation to camping—fire hazards, drinking water, axe and knife safety, hiking, poisonous plants, wild animals, getting lost in woods, keeping and leaving a clean campsite. 2. Participate in the following activities pertaining to boating: a) make posters of boating laws and regulations. Invite an authorized person in to explain the rules and regulations. b) list dangerous boating areas and conditions in your area. c) collect newspaper clippings about boating accidents and discuss them d) make a model of a boat showing important parts and its equipment. d) develop a glossary or vocabulary list of useful boating terms. f) discuss with an authorized person how a boat should be handled safely, including overloading, standing up, etc. 3. Through role-play situations illustrate boating or camping safety practices. 4. Investigate water safety practices involving the following circumstances: a) the need for knowing how to swim well b) supervision whenever and wherever young people are swimming c) diving or using inflated devices and swimming in the ocean or surf. d) non-swimmer rescue techniques e) the buddy system f) staying in water too long g) swimming after eating h) swimming alone 5. Make posters of swimming rules. 6. Construct bulletin board displays illustrating safe swimming practices. Include general water safety practices. 7. Investigate the safety of local swimming areas. 8. Demonstrate techniques for water rescue of self and/or others.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Preparedness helps to develop appropriate responses to hazardous and emergency conditions.	1. Investigate natural disasters which have occured in the area or have a likelihood of occurring and the preparation necessary to cope with them. Plan how your school could be involved. 2. Make a bulletin board display of emergency conditions and study what would be needed in each of these emergencies. 3. Have local emergency unit members in to explain their functions. 4. Discuss the importance of health maintenance for purposes of better coping with emergencies. 5. Prepare list of foods, clothing, medicines and equipment most appropriate for an emergency situation. 6. Investigate how your school is involved in the community civil defense program, i.e. shelter, food and equipment storage, etc. 7. Learn the meaning of the various civil defense signals and post directions at home and at school. 8. Develop a questionnaire and interview parents and neighbors to find out how well informed the community is in civil defense.

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Potential dangers are inherent in many school activities.	1. Investigate safety procedures practiced in subject areas such as chemistry, home economics, agriculture, physical education and industrial arts. Evaluate the adequacy of such practices. 2. Discuss the importance of training rules and routine in athletics. 3. Develop a list of types of accidents that may result from improper actions while participating in various school programs and activities. 4. Determine the relationship between these accidents and similar ones that may occur outside of school and report orally to class. 5. Investigate accidents as a cause for school absence. Compare findings at the elementary level with those at the secondary. 6. Study losses both in money and in man hours to our economy resulting from poor safety practices in industry and business. 7. Invite the safety director of a local plant to discuss safety in industry.
Dangers are inherent in most normal living activities, but with proper precautions they can be avoided without too many restrictions on the actions of most people.	1. Demonstrate how accidents may be caused through haste or speed. 2. Demonstrate how accidents can be caused by misjudgment of one's physical inadequacies or frailties. 3. Through role-play illustrate how accidents can be caused by practical jokes. 4. List and discuss the possibilities of accidents occurring from the improper use of machines, equipment or appliances. 5. Organize into buss sessions and compile comprehensive lists of seasonal hazards. 6. Discuss accidents caused by improper lighting. 7. Develop safety posters illustrating possible injuries caused by using unsafe or unfamiliar equipment.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
The prevention of highway accidents is often shared responsibility of driver and pedestrian.	1. Investigate the accident records of teenage drivers as compared with older groups. 2. Collect and display pictures of various designs for road safety, such as underpasses, clover-leaf, intersections, circles, turn lanes, etc. 3. Discuss the value of lights, signals, road signs, painted lanes, one way streets, etc. in relation to highway safety. 4. Investigate and discuss the laws dealing with learner permits, license requirements, etc. 5. Develop suggested behaviors for pedestrian courtesy. 6. Develop simulated highway and pedestrian accident situations and/or conditions. Using these illustrations demonstrate the factors which are absent and have thus led to it being an accident, i.e. courtesy, emotions, attitudes, etc.
Knowledge and practice of safety rules in recreational activities helps to prevent accidents.	1. Select panel of athletes in various sports to discuss with class measures taken to prevent accidents. 2. Investigate accidents that occur in organized and unorganized recreational activities. Discuss implications.
Knowledge of the handling of firearms and explosives is important to the enjoyment of a potentially hazardous recreational activity.	1. Demonstrate proper gun handling. 2. Study rules for hunter safety. 3. Demonstrate safe hunting practices. 4. Invite a local game officer to talk about game laws and property damage. Investigate the availability of local Hunter Safety courses. 5. Prepare a chart showing range of various sizes of guns and different types of ammunition. 6 Display and discuss proper clothing and equipment for hunting. 7. Display on bulletin board types of explosives including fireworks, blasting caps, dynamite. 8. Discuss Pennsylvania laws in relation to the purchase of firearms.
Water safety instruction can prevent needless accidents and develop skills for leisure hours.	1. Review the dangers encountered by swimmers, e.g. cramps, exhaustion, current, diving in unknown waters, etc. 2. Use bulletin board displays of procedures in prevention and care of sunburn. 3. Collect newspaper clippings as a basis for discussions on boating and swimming safety. 4. Investigate local facilities and opportunities for improving swimming and boating skills. 5. Obtain pool for instruction in basic water safety rescue techniques.
Safety consciousness is a necessary factor in fulfilling the responsibilities of teenage baby sitting.	1. Solicit the assistance of a local pediatrician to work with students in developing a code of behavior for baby-sitters. 2. Through consultation with parents, neighbors, friends, relatives, etc. construct a baby sitting manual of practical suggestions related to anticipated babysitting responsibilities and activities. May include parents expectations of baby sitters.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
	3. Develop problematic baby sitting situations and demonstrate suggested ways in which such circumstances could be avoided or the danger lessened.
Accurate knowledge is important in handling an emergency situation.	Note: In order for up-to-date techniques, methods and content to be taught, all teachers should be aware of the most recent resource material. It is recommended that the official American Red Cross Junior First Aid Course be followed.
	1. Develop the definition of first aid with pupils.
	2. Investigate reasons for studying first aid.
	3. Illustrate various types of injuries using bulletin board displays of drawings.
	4. Demonstrate methods of controlling bleeding.
	5. Secure copies of X-ray films from local hospital or doctor's office to illustrate fractures.
	6. Contact local Red Cross Chapter to see if "Resusci-Anne" is available for practice of mouth-to-mouth resuscitation.
	7. Design bulletin board display to show various first aid practices.
	8. Demonstrate the treatment of burns. Check on latest procedures from your local school physician or local hospital.
	9. Have each student conduct survey of items in home medicine closet. Identify contents as: outdated, possibly dangerous, necessary, or missing.
	10. Have committees report on common home poisons and their antidotes.
Emergencies can involve whole families or communities.	1. Investigate the local Civil Defense Program.
	2. Survey areas around school and home for protection in the event of man-made or natural disaster.
	3. Draw up a plan for family protection or evaluation in case of acute emergency or disaster.
	4. Practice, through simulated conditions, procedures to be followed in reacting to disaster emergencies; at home, in school and about the community.

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Accidents cause a loss of both human and natural resources.	1. Using simulated accidents or those taken from the papers or magazines analyze the anatomy of the accident. Ask: What were the causes and the cost in lives, time and money?
	2. Investigate accident facts and other materials from the National Safety Council.
	3. Develop bulletin board displays on accident rates at different ages for boys and girls; injuries from accidents, cost of accidents; comparison of deaths from diseases and accidents, etc.
	4. Hold panel discussion on the relationship of personality to accidents.

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CONCEPTS	SUGGESTED PUPIL-TEACHER ACTIVITIES
Knowledge of application of safety and practices in industrial, recreational and leisure activities adds to their enjoyment and helps to prevent accidents.	1. Discuss the relationship of accidents to rules, equipment and courtesy. 2. Compare recreational opportunities and safety today with that of fifty or one hundred years ago. 3. Collect newspaper or magazine clippings of different recreational accidents. Discuss how these were caused and how they might have been avoided. 4. Write rhymes or slogans for use in school or recreational safety campaign. 5. Photograph recreation activities depicting good and poor conditions and design bulletin board display. 6. Discuss local and national groups which promote recreational safety. Discuss the function of the National Safety Council. 7. Have a representative of the American Red Cross speak to class. 8. Make arrangements to develop individual ability in swimming and life saving. 9. Study boating and canoeing accidents; their cause and prevention. 10. Invite a National Rifle Association Gun Safety Instructor to speak to class. 11. Have a committee arrange a display for the bulletin board on safety measures in seasonal activities; such as skiing, water skiing, tabogganing, mountain climbing, biking, camping and hunting. 12. Investigate and analyze school physical education and athletic accidents. 13. Have volunteers examine sporting equipment and report on protective devices. 14. Invite the physical education teacher to discuss how good physical condition and acquiring physical skills are important factors in avoiding accidents. 15. Select an area of recreation one wishes to investigate. Write a paper on knowledge and skills needed to enjoy the activity. Stress the hazards that are minimized by this knowledge and skill. 16. Investigate industrial programs toward accident prevention. 17. Discuss relationship of mental health to safety education.
Certain factors contribute to home and school accidents, but action can be taken to cut down the accident toll.	1. Discuss student practices that may lead to accidents in cafeteria, halls and other areas. 2. Investigate and analyze school accident reports. 3. Organize and promote a school safety campaign. 4. Discuss specific problems of the aged related to accident prevention. 5. Take pictures of home hazards or make a model of unsafe home conditions. Discuss and analyze these conditions and how they could be corrected. 6. Discuss or demonstrate use of knives, hand tools and power tools. 7. Display household poisons that students find in their homes.

CONCEPTS

SUGGESTED PUPIL-TEACHER ACTIVITIES

8. Invite a member of the fire department to speak on fires in the home and their causes.
9. Invite a local fire department member to demonstrate the speed at which fires may start and spread.
10. Demonstrate how to use different types of fire extinguishers.
11. Demonstrate proper methods to clean rifle, pistol or revolver.

SAFETY

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this unit.

1. American Association for Health, Physical Education and Recreation, *Annual Safety Education Review*. (Washington: NEA Publications-Sales).
2. American Medical Association, Department of Community Health and Health Education, 535 North Dearborn Street, Chicago, Illinois 60610
3. Pennsylvania Department of Labor and Industry Bureau of Industrial Standards, Seventh and Foster Streets, Harrisburg, Pennsylvania 17126
4. Pennsylvania Department of Education, Bureau of General and Academic Education, Division of Highway and Aviation Education, Box 911, Harrisburg, Pennsylvania 17126
5. Florio, A.E; and and G.T. Strafford, *Safety Education*. (New York: McGraw-Hill Book Company, Inc., 1962).
6. National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60611
7. Wilgoose, Carl E., *Health Education in the Elementary Schools*. Philadelphia: W.B. Saunders Company, 1969).

SMOKING

Rationale for Unit:

Until recently tobacco smoking was a practice that one could take or leave without undue concern that it presented any critical risk to one's health or life. Today, physicians and scientists are convinced that the period of uncertainty is over. While research will continue to probe the yet unsolved mysteries related to smoking and health there appears to be little reason to doubt that lung cancer is directly associated with cigarette smoking; that heart disease and cigarette smoking share a relationship; and that bronchitis, emphysema and chronic disability can also be traced to cigarette smoking.

Nearly 70 million people in the United States consume 500,000,000,000 cigarettes regularly. While per capita consumption of other forms of tobacco has gone down, cigarette consumption has increased per person. It is estimated that roughly 2/3 of the men and 1/3 of the women over 18 smoke.

The smoking habit usually begins in the early teens. By grade 12, 40 - 55% of all children are found to be smoking according to one study. Another study in American secondary schools indicates that about one of every four boys smokes cigarettes, and one of every eight girls. Boys seem to be heavier smokers and this ratio seems to follow through in adult life. It has been estimated that 60 percent of American men smoke compared to 30 percent of American women. Many national, state, and local health agencies consider smoking, particularly among teenagers, to be one of today's most important health problems.

The United States Surgeon General's Report *Smoking and Health,* made in 1964 and a later report in 1967, confirmed the serious health risks attributed to smoking. Skilled research personnel have conducted studies that prove smoking, particularly cigarette smoking, is associated with a shortened life expectancy. The majority of physicians and researchers believe these observations to be correct and support the warning that "If you do smoke, quit." and "If you don't smoke, don't start." There are still some physicians and research personnel who are not completely sure of the effect of cigarette smoking on health, although their number is dwindling. Nevertheless, they advise: "Be moderate if you must smoke."

The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association resolved "That schools, physicians, health departments, and other community agencies cooperate in an aggressive program designed to discourage children from starting the smoking habit and to influence youth who are smoking to discontinue the habit." May this resolution be a challenge to every teacher to assist individuals with every possible resource in reaching a solution about their smoking by studying the available evidence, making a rational decision and acting on it.

Basic Concept:

There is substantial evidence that smoking, particularly cigarette smoking, is harmful to health. Individuals must be aware of and understand the health hazards associated with smoking so they can make an intelligent, personal decision on whether to smoke or not to smoke.

Suggested Pupil Outcomes:

1. Examine and evaluate the health hazards associated with smoking as they pertain to the individual and society.
2. Demonstrate a knowledge of the laws regulating the sale and use of tobacco products.
3. Identify and evaluate the smoking problem so that an intelligent personal decision can be made on whether to smoke or not to smoke.
4. Conclude the importance of health in leading an active, productive life.
5. Demonstrate ability to evaluate information related to tobacco products.

SMOKING

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CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
People smoke or refrain from smoking for a variety of reasons.	1. Examine the reasons people in general give for smoking. 2. Survey parents on their attitudes concernings smoking. a) Do you think smoking is harmful? b) Do you approve of young people smoking? c) Do you think you could stop smoking? d) Have you tried to stop smoking? e) Do you wish you never started smoking? 3. List the advantages and disadvantages of smoking. 4. Identify and examine reasons why young people begin smoking.
Cigarette smoking is harmful to the body.	1. Discuss the effects of smoking on the body. a) heart rate b) shortness of breath c) appetite d) irritation of the nose and throat e) life-span
Lung cancer and other chronic diseases are found more frequently among smokers than non-smokers.	1. Invite a doctor to discuss the relationship of lung cancer and other chronic diseases to smoking habits. 2. Examine the results of continuing research relating smoking to chronic diseases.
Smoking advertisements affect youth in many different ways.	1. Evaluate with the pupils their feelings and understanding of smoking advertisements. a) Relate the benefits of smoking in television ads. b) Question whether advertisements tell one to smoke.
Smoking is a dangerous habit that is very difficult to change.	1. Explain why the smoking habit is so difficult to break. 2. Discuss why young people should not smoke. Consider reasons of health, disease, and cost to the individual and society.
Along with a great increase in smoking over the last 25 years, there has been a corresponding increase in lung cancer.	1. Construct a graph showing the lung cancer death rate of cigarette smokers and non-smokers for the past 25 years. 2. Examine the risk of getting lung cancer after one gives up smoking. 3. Construct a chart showing the lung cancer cure-rate. 4. Compare the risks of pipe, cigar, cigarette smokers and non-smokers in developing lung cancer and other respiratory diseases.
Diseases other than lung cancer are found more commonly among cigarette smokers than non-smokers.	1. Write volunteer health agencies requesting information showing the relationship of smoking with coronary heart disease, emphysema, pulmonary bronchitis, and stomach ulcers. The teacher should do this to avoid a flood of letters descending upon local agencies. 2. Organize small study groups to examine materials from each agency contacted and report to class.
Cigarette smoking may affect the individual in ways other than health.	1. Investigate the cost of smoking one pack of cigarettes a day for a week, a month, and for a year.

SMOKING

4 - 6

CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
	2. Investigate the cost of careless smoking habits which may result in great loss to timber, wildlife, and recreation areas. 3. Discuss how fires are caused by careless smoking habits.
Tobacco advertising may be misleading.	1. Examine the appeal of smoking advertising and the effect on causing young people to start the smoking habit. 2. Discuss the use and effectiveness of cigarette filters. 3. Bring smoking advertisements to class and evaluate them.
Smoking can affect the performance of an athlete.	1. Invite one of the school's athletic coaches to explain why athletes should not smoke. 2. Display posters of professional athletes endorsing non-smoking. 3. Invite varsity athletes, who are and have been non-smokers to discuss the reasons for not smoking.

SMOKING

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There is no single explanation for smoking behavior.	1. Discuss the early use of tobacco by the American Indians, the Europeans, and the present-day use of tobacco products. 2. Bring in current newspapers and magazine articles discussing the use of tobacco products and its consequences. 3. List reasons why people (teenagers in particular) do or do not smoke. List the benefits derived from smoking. Compare. 4. Have a committee of students conduct a survey of the opinions of parents, friends and coaches, on the use of tobacco by teenagers. 5. Survey classes to determine the smoking attitudes and habits of students. 6. Present appropriate film or filmstrip as introduction or summary. 7. Discuss: a) how to refuse a cigarette b) how smoking affect others at a meeting or social function 8. Investigate the state laws regarding the sale and use of tobacco products. 9. Investigate a possible linkage between the use of tobacco, alcohol and drugs.
Cigarette smoking is causally related to lung cancer in men.	1. Identify and examine the contents of a cigarette. 2. Examine the effects of nicotine on the body. 3. Investigate the carcinogens found in the tar residues of cigarette smoke. 4. Chart the incidence of lung cancer found in cigar, pipe, cigarette smokers, and non-smokers. 5. Conduct research and make reports or examine by discussion panel the Surgeon General's report of 1964 and 1967 and/or related literature printed subsequently.

SMOKING

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CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
	6. Construct a chart indicating the brand names of cigarettes, nicotine content, and the effectiveness of brand filters. 7. List the types and effectiveness of cigarette filters. 8. Chart the lung cancer death rate for the past 10 years. Include the following groups: never smoked, less than 1 pack per day; ½-1 pack per day, 1-2 packs per day; 2 or more packs per day. 9. Obtain and show photomicrographs of cancerous and non-cancerous lung tissue. 10. Discuss the treatments for lung cancer patients. 11. Investigate how tars from cigarettes affect the membrane of the respiratory tract. 12. Discuss: Why and how did Congress pass a law requiring cigarette companies to print a warning on each pack of cigarettes?
Chronic bronchitis, pulmonary emphysema, cardiovascular disease are found more commonly in cigarette smokers than nonsmokers.	1. Investigate the effect of cigarette smoking on chronic bronchitis, pulmonary emphysema, cardiovascular disease, peptic ulcer, and emphysema. a) compare smokers and non-smokers mortality and morbidity rates. b) specific effects caused by smoking c) treatment d) prognosis 2. Invite an inhalation therapist to discuss his role in treating respiratory diseases. Discuss the use of tobacco products as seen through his experiences.
Millions of dollars are spent annually to influence the smoking habits of the public.	1. Compare the amount of money spent annually in the U. S. for smoking, education, recreation, welfare and hospitalization. 2. Tape radio and television smoking commercials and discuss them in class (type of appeal, age groups).

SMOKING

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Smoking seems to be related to a range of diverse psychological behaviors which may be set off by different personal needs.	1. Develop a questionnaire for a school survey on smoking attitudes and habits. Publish the results in the school paper. 2. Interview friends and doctors to find out how and why they started smoking. 3. Study advertising propaganda that deals with smoking in an effort to see what the image of a smoker is and how this influences youth and adults to start to smoke. 4. Ascertain the effect of family relationships on influencing smoking habits. 5. Determine the cultural and sociological influences on the attitudes and habits of smokers. 6. Utilize appropriate film or filmstrip. 7. Debate: "Should cigarette advertising be banned?"

SMOKING

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CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
	8. Debate: "The pro's and con's of smoking." (Suggest, if possible, the panel be made up of smokers and non-smokers.) 9. Evaluate reasons for professional athletes being discouraged from participating in cigarette advertisements. 10. Discuss the unattractive personal characteristics of a smoker. Contrast these with attractive characteristics.
Smoking directly affects many of the body functions.	1. Investigate through discussion or reports the contents of cigarette smoke, and its effect on human tissue. 2. Review studies and experiments comparing the physical ability before and after smoking in terms of temperature, pulse, blood pressure, vital capacity and muscular coordination and respiration. 3. Investigate the effects of smoking on exercise and physical fitness.
The evidence linking cigarette smoking and lung cancer is very substantial.	1. Review the trends since 1920 concerning the increase in tobacco consumption. 2. Construct a chart showing the increase in morbidity and mortality rates of lung cancer since 1920. 3. Discuss the implication of the Surgeon General's Reports of 1964 and 1967. 4. Report on the American Medical Association's position on smoking and health. 5. Cite legislation requiring cigarette companies to warn the public of the risks in using their products. Investigate cases of suits brought against tobacco companies by smokers. 6. Post magazine articles discussing research that is being conducted relating to the treatment and cure of lung cancer patients. 7. Exhibit smoking posters obtained from the American Cancer Society. 8. Research and discuss: "Does smoking more and inhaling deeply increase the odds relating to premature death?"
The mortality ratio of cigarette smokers over non-smokers is particularly high for the diseases of chronic bronchitis, emphysema, cancer of the larynx, peptic ulcers, and heart and coronary diseases.	1. Report on the following aspects concerning chronic bronchitis, emphysema, cancer of the larynx, oral cavity, esophagus, peptic ulcer, and heart and circulatory disease. a) incidence and trends b) effects of cigarette smoking c) prognosis d) recovery statistics e) research f) detection 2. Present appropriate film or filmstrip.
Smoking is an expensive as well as a dangerous habit.	1. Review the amount of money one could save by not smoking a pack of cigarettes a day for one year, five years, until retirement. 2. Review the cost of treatment and rehabilitation of those with diseases related to smoking.

SMOKING

10 - 12

CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
	3. Review the costs imposed on society by careless smoking habits.
Many states have laws and regulations concerning the sale of tobacco products.	1. Discuss the effectiveness and enforcement of Pennsylvania laws covering the sale and use of tobacco. 2. Buzz session: Are school smoking regulations necessary? Are they enforced? If not, why not? 3. Debate: Cigarette taxes should be used for Health and Smoking Education. 4. Discuss how advisable are school smoking rooms.
Guidelines are now available to help those who desire to give up the smoking habit.	1. Ask an enthusiastic ex-smoker to talk with the class or students and answer questions on his experiences while attempting to end the smoking habit. 2. Discuss the value of chemicals and/or anti-smoking products in developing an aversion to smoking. 3. Investigate the development of a safe cigarette. 4. Have a member of a local withdrawal clinic speak to students on learning to live without cigarettes. 5. Describe individual and group withdrawal techniques. a) avoid smoking situations b) substitutes for smoking 6. Investigate an individual's need for the oral stimulation provided by a cigarette, pipe or cigar.

SMOKING

GRADE 13

The reasons for smoking are considered to be largely psychological and sociological.	1. Discuss and evaluate the reasons given for smoking. 2. Discuss the beneficial effects of smoking in the area of mental health. 3. Consider the case of total abstension. 4. List the factors influencing smoking habits. 5. Discuss the reasons given for being a non-smoker. 6. Discuss how a smoker may affect others around him? 7. Debate: Group of smokers and non-smokers debate the pro's and con's of smoking.
Mounting evidence from various sources indicate that smoking contributes to mortality from certain specific diseases and to the overall death rate.	1. Review the stand of the American Medical Association concerning smoking and health. 2. Review and discuss the reports of the Surgeon General's Office, 1964-67. 3. Summarize the findings of the Royal College of Physicians of London on the effects of smoking and health. 4. Investigate the American Cancer Society's Research Program in the field of smoking and health. 5. Examine the recuperative powers of the body and its tissues of persons who stop smoking.

SMOKING

GRADE 13

CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
Cigarette advertising is not always accurate and is often misleading.	1. Discussion: Why do some athletes advertise tobacco products? 2. Study the effects of advertising on consumer demands. 3. Evaluate the smoker's image as portrayed through advertising. Is it one of reality or fantasy?
Cigarette smoking is causally related to lung cancer in men.	1. Review the death rate from cigarette smoking for the last 10 years in smokers and non-smokers. 2. Research and report on the risk of developing lung cancer in the following conditions: a) in men and women b) in pipe, cigar, and cigarette smokers, and non-smokers c) between cigarette smoking and occupational causes d) between the duration and the number of cigarettes smoked per day. 3. Review the anatomy and physiology of the respiratory system in relation to the effects of smoking.
Chronic bronchitis, pulmonary emphysema, coronary artery disease and certain other diseases are found more commonly in cigarette smokers than nonsmokers.	1. Review the following diseases and their relationship to cigarette smoking: chronic bronchitis, emphysema, coronary artery disease, peptic ulcers, cancer of the oral cavity and esophagus. a) incidence and trends b) recovery statistics c) prognosis and treatment d) research e) detection 2. Panel discussion: The effects of smoking on the human body. The panel may include: physician, inhalation therapist, thoracic surgeon, psychologist, cancer researcher. 3. Investigate the effects of smoking and infant birth weight.
There are economic and other reasons for research efforts designed to maintain the tobacco industry and produce a cigarette that is not harmful to health.	1. Investigate the tobacco industry and its effect on the nation's economy. 2. Report: Taxes on tobacco brought to the United States Government. 3. Examine the types of research carried on by the tobacco industry. 4. Discuss how research can protect the smoker against himself. 5. Discuss political problems inherent in any tobacco curtailing legislation.
To stop smoking frequently involves a personal commitment, physiological as well as psychological.	1. Examine the United States Department of Health, Education and Welfare, *Guidelines to Help an Individual Stop the Smoking Habit.* 2. Identify and discuss anti-smoking programs in your community and the techniques employed. 3. Invite a member of one of the anti-smoking clinics in your area to address the class. 4. Investigate ways and means to stop the habit permanently drawing upon personal observations and experiences.

SMOKING

GRADE 13

CONCEPTS	SUGGESTED PUPIL - TEACHER ACTIVITIES
Intoxicating drugs may be smoked in the form of crude cigarettes.	1. Have a doctor speak to students concerning the use and effects produced by marijuana cigarettes. 2. Discuss the risks associated with smoking of marijuana. 3. Refer to section on Drugs and Narcotics.

SMOKING

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this Unit.

1. American Association for Health, Physical Education and Recreation, 1201 16th Street, N.W., Washington, D.C. 20036
2. American Cancer Society, Pennsylvania Division, 3309 Spring Street, Harrisburg, Pennsylvania 17110
3. American Medical Association. *Today's Health Guide*. (Chicago: American Medical Association, 1965.)
4. Pennsylvania Heart Association, 2743 North Front Street, Harrisburg, Pennsylvania 17110
5. Pennsylvania Tuberculosis and Respiratory Disease Association, 311 South Juniper Street, Room 1000, Philadelphia, Pennsylvania 19107
6. U. S. Surgeon General Advisory Committee, *Smoking and Health*. (U.S. Department of Health, Education and Welfare, Bulletin No. 1103, Washington, D. C. 1964.)

Section Four

Evaluation

EVALUATION

Rationale:

Should evaluation only test the student? Should it involve only the recall of facts from rote memory? Should evaluation be solely for the purpose of grading students? Or should it encompass an opportunity for the learner to apply health knowledge and to analyze and examine health information in such a way as to be meaningful and useful to him?

Authorities seem to agree that evaluation involves much more than providing a basis for grading students. Fodor and Dalis (3) state that the purposes for evaluation in health education should include (a) an assessment of health needs and interests; (b) a determination of the strengths and weaknesses of the instructional program; and (c) an evaluation of the attainment of behaviors sought in the learner.

Evaluation should never be a process that is developed only after instruction has taken place. It is by necessity, a continuing program. It becomes increasingly important that effective evaluation begin at the time the first objectives are formulated, parallel the development of subsequent content materials and ultimately climax the completion of instruction. In short, evaluation should precede, parallel, and follow the instructional program.

Does evaluation only pertain to student evaluation? It would be well to emphazise that student assessment is only one phase of the total evaluation process. Evaluation must involve the self evaluation of the teacher as well as a keen scrutiny of the materials used, environmental conditions under which instruction takes place, and the health services utilized throughout the program.

Involvement in such comprehensive evaluation procedures should include not only the teacher, curriculum coordinator and perhaps and administrator, but students, parents and community agencies as well. It seems totally inadequate that the teacher alone attempt such a task since he cannot possibly view the program from the many vantage points necessary for thorough program review and evaluation.

Evaluation can be a very important tool in the teacher's hands if he chooses to use it wisely. However, to evaluate for grade purposes only is a critical misuse of the evaluation process. While grading occupies a significant, and yet perhaps a controversial position in the educational milieu, it nevertheless should consume a relatively small portion of the total evaluation in the overall health education program. Suggested areas of emphasis are described in the following paragraphs.

Areas of emphasis in evaluation:

A. Self Evaluation: No evaluation can be complete without an emphasis on self evaluation. It is essential that the teacher fully recognize her role as a facilitator of learning and continually endeavor to access how well this responsibility is being carried out. Several ways are suggested for personal evaluation:

1. *Instructor rating sheet* - This rating sheet (see example, Figure A) shall be filled out by the students. It may be completed at about the halfway point in the course or semester, or may be filled out near the close of the instructional period. Using it at the mid-point enables the instructor to make those changes felt to be beneficial to the improvement of the instructional climate.

2. *Systematic Observation of Teacher Behavior* - There are several such systems in use today. They are not rating scales, but a method for coding the language or dialog of the classroom for purposes of assessing teacher behavior and methods of instruction. While this publication does not permit that adequate space be given to each of these systems, it is well to recognize that such programs are recognized as a possible approach to self evaluation. It is recommended that the interested teacher avail himself of the literature related to Systematic Observation of Teacher Behaviors. (1)

3. *Video-tape recording* - The video-tape recorder has become an invaluable piece of equipment in education over a relatively short span of years. Its promise of even greater usefulness is almost limitless. In teacher evaluation it can be mercilessly accurate in feeding back to the teacher, immediately, the success or failure of teaching methods and/or classroom interaction.

   Many schools are equipped with video-taping equipment of the portable and permanent nature. It is suggested that teachers investigate the multi-uses of this equipment in health instruction. Systematic observation and coding of teacher behaviors can be very appropriately coordinated with the use of video-tape.

4. *Audio-tape recording* - While not as effective an instrument for self evaluation as the video-tape recorder, the audio-tape recorder can adequately assist the teacher in self evaluation. Class sessions may be taped, replayed and even systematically coded if desired.

   Taping of the lesson also provides an accurate means for reviewing materials covered and for listening to student responses. From such responses a listing of questions frequently

FIGURE A

INSTRUCTOR RATING SHEET

CHECK UNDER THE APPROPRIATE COLUMN (A, B, C or D)
the extent to which the instructor evidences the listed attribute.

A– to a considerable extent
B– to a moderate extent
C– to a minimal extent
D– barely evident or non-existent

The instructor evidences the attribute to this extent:	**A**	**B**	**C**	**D**
1. Knowledge of course content and area				
2. Ability to elucidate issues				
3. Enthusiasm for course and content				
4. Readiness to entertain ideas of learners				
5. Awareness and appreciation of class purposes				
6. Sense of humor				
7. Open-mindedness to opposing ideas and views				
8. Clarity of criteria and fairness in grading				
9. Clarity in making assignments				
10. Willingness to confer individually with learners				
11. Ability to keep discussion to the point				

Value to learners:	**Extremely High**	**Considerable**	**Modest**	**Nil**
A. Of recommended readings				
B. Of class discussion				
C. Of term papers				
D. Of individual consultations				

Objectives for this course, in addition to the present ones, should include:

_____

_____

In addition to the teaching methods used in the course, the inclusion of the following (speakers, laboratory work, field trips, more discussion, etc.) would make the course more meaningful to me. Please be specific, and include other methods applicable.

_____

_____

asked by the lecturer may be compiled. In addition, the recorder can provide the teacher with valuable learner feedback as an indication of how well he is handling the material.

B. *Program Evaluation:* Program evaluation includes such areas as content, objectives, pupil learning activities, and the evaluation process itself. A look at each of these areas reveal certain specifics which deserve regular and continued emphasis.

1. *Content* - Health content needs to be constantly evaluated to ascertain its current status. Changes occur rapidly and new materials are being abundantly produced. So much so that text books tend to become almost obsolete long before most schools are able to replace them. Therefore, it is recommended that a resource library be established of health texts rather than purchasing a large number of text books for every student. This would enable students to research current literature on health problems and work independently from many sources rather than one. Not only would a comprehensive resource library serve beneficially for instructional purposes, but may be more economical to support. Bi-yearly assessment of your resources is suggested for the purpose of evaluating the relevancy of present materials and reviewing the field of new materials. Further, health content needs to be assessed with particular reference to its interdisciplinary structures. Coordination of all disciplines allied to the health content area is essential for comprehensive program planning. While the health coordinator should assume responsibility for total coordination of the health program it is important to assure the participation of those instructional areas such as home economics, biology and social studies that can effectively contribute to the total health program. Failure to include such disciplines can result in incomplete programming, duplication of effort, and even worse, a disenchanted learner who is forced to needlessly repeat materials previously learned.

2. *Objectives* - An introduction to the preparation of *Instructional Objectives* is presented in Section II. Referral to this section is suggested in evaluating the objectives of your health program. An instructional objective will clearly state the behavior expected of the learner sufficiently to avoid misunderstanding. In addition, it will indicate the conditions under which such a behavior shall be observed and establish the criterion for evaluating the performance. When clearly defined objectives are not present, evaluation becomes extremely difficult because a logically sound basis for such evaluation is lacking.

When evaluating objectives, it is well to also observe the range and level to which objectives have been developed. While instructional objectives at the recall and comprehension level may be meaningful, instructional opportunities must extend beyond rote memory and factual regurgitation. If learner behaviors and attitudes are to be approached, it would seem imperative that the goals of instruction also focus upon objectives at the analysis, synthesis and evaluation levels. Comprehending factual information may in no way reflect ability to evaluate unless objectives are purposely established to permit such behavior to develop and mature.

3. *Pupil Learning Activities* - Pupil learning activities are those experiences in which the learner engages in developing a concept or achieving an objective. They are the core of the teaching-learning climate and need to be congruent with stated program objectives. In evaluating pupil learning activities careful consideration should be given to whether such activities:

- ... are appropriate to the emotional and developmental level of the learner
- ... provide opportunity for multiple application of the senses
- ... provide for integrated experiences
- ... flexibly permit individual differences to prevail
- ... provide opportunity for application of behaviors indicated in objectives

4. *Evaluation Process* - To evaluate the evaluation process may seem like double talk, yet it is a very real and significant aspect of total evaluation. Continuous scrutiny must be given to the instruments and methods used in the evaluation process. They should be carefully screened using as criteria such questions as:

- ... Do the instruments have reliability and validity?
- ... Are the methods congruent with the stated objectives?
- ... Are various means of evaluation used?
- ... Are results used for more purposes than assigning grades? (Such as content assessment, teacher evaluation, methods of presentation, further program development, etc.)
- ... Is the evaluation process performed with continuity and specific purpose/s.

C. *External evaluation* - So often evaluation is limited to the program and possibly the teacher. However, it seems extremely important to seek information on how others might be seeing and/or experiencing the health program. Keeping in mind the statement, "It is sometimes difficult to see the forest for the trees." The teacher is encouraged to move beyond himself and the colleagues of his own discipline in evaluation of the school health program. In so doing, he will be exploring definite approaches toward keeping health education focused in meaningful and relevant directions.

It is suggested that the following individuals and groups be included in any comprehensive program evaluation.

Teachers - Health is everyone's concern and responsibility and teachers outside the discipline of health and physical education can serve immeasurably to provide feedback to the health teacher in evaluation of the total health program.

Solicitation of their expertise may be obtained through a personal interview, questionnaire, or request for personal observation of student behavior as it relates to health knowledge, attitudes and values. The counsel of all school personnel should be a valued source of information for the health coordinator.

Administrators - Administrators, like teachers, should be included among school personnel solicited for purposes of evaluating the school health program. He should be kept well informed of program developments and receive periodic suggestions for program improvement. His philosophy towards health will do much to determine the success or failure of the program and that philosophy can be shaped through knowledge and involvement suggested and provided by the health coordinator.

Students - Assuming that health education is based on the needs and interests of the learner, it would seem imperative that the student (learner) be provided the opportunity to share in the evaluation of the program. Areas of student evaluation should include; content, materials, teachers, health services, school environment and self evaluation.

Student evaluation should not be taken lightly or engaged in for purposes of appeasement. Evaluation by the learner can be highly enlightening and the teacher who subjugates its importance may be remiss in the discharge of his responsibilities.

Community - Included within the intent of community involvement is, of course, the home. Parents can provide a valid source of information concerning the health needs and interests of the community. This avenue of information should not be avoided for it may provide a valuable link, so often missing, in parallel services to the student. Without home and community involvement, much of the school health program is lessened in its effectiveness. Verbal and written lines of communication can become invaluable means for assessing the development of health attitudes and practices as they are exhibited outside the school environment.

Evaluation can in no way be taken for granted. It must be planned, coordinated, and its findings implemented if it is to serve the best interests of all concerned. It must escape from the category of student grading if it is to truly assess the total school health program.

EVALUATION

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this section.

1. Amidon, Edmund J. and John B. Hough, Editors *Interaction Analysis: Theory, Research and Application*. (Reading, Massachusetts: Addison-Wesley Publishing Company, 1967.)
2. Beyer, Mary K.; Ann E. Nolte and Marian K. Sholleder, *A Directory of Selected References and Resources for Health Instruction*. (Minneapolis, Minnesota: Burgess Publishing Company, 1966.)
3. Fodor, John T. and Gus T. Dalis, *Health Instruction: Theory and Application*. (Philadelphia: Lea and Febiger, 1966, pp. 124-125).
4. Mager, Robert F., *Preparing Instructional Objectives*. (Palo Alto, California: Fearon Publishers, 1962).
5. Mayshark, Cyrus and Leslie Irwin, *Health Instruction in Secondary Schools*. (Saint Louis: C.V. Mosby Company, 1968).

Section Five

School Health Services and Environment

SCHOOL HEALTH SERVICES

Rationale:

Health services as applied to the school program embody all efforts of the school to conserve, protect, and improve the health of the pupils and the school personnel. This broad purpose can only be achieved through the combined, coordinated efforts of teachers, school nurses, administrators, physicians, dentists, dental hygienists, eye specialists and parents.

School health services are obligated to seek the highest level of health for each child in order that he can take full advantage of his opportunities for education. The school health services have a responsibility to adapt their programs to the physiological, emotional and intellectual levels of each child as well as being cognizant of local and personal customs.

While recognizing that parents have the primary responsibility for their children's health, the school, through health instruction, healthful school living and health sevices supplements the home in safeguarding and promoting the health of children. Keeping in mind that today's students will be tomorrow's parents and citizens, school health services have an obligation, through education, to develop sound health attitudes, understandings and practices to assure that every individual will assume responsibility for his own health and that of his family and community.

School health services is the third part of the total school health concept. Although the three parts have different titles they merge into one concept in which all are interrelated and interdependent upon each other.

School health services contribute to health instruction and healthful school living.

Healthful school living becomes possible when school health services provide a healthful environment.

Health instruction encourages healthful living and utilizes school health services for educational purposes.

Through this interrelation of functions an effective total health program will best serve pupils and school personnel alike.

Basic Concept:

School health services are those school activities directly concerned with the personal health evaluation of students for the purposes of achieving and maintaining the highest possible standard of health, both physically and emotionally; to enable them to function at their optimal level in school; and to assist them in the development and maintenance of sound health practices.

Goals and Objectives:

School Health Services shall:

1. Provide the highest possible level of health for each child in order that he may take full advantage of his opportunities for education.

2. Contribute to the development of sound health attitudes, understandings and practices in order that each child will achieve a high degree of self-reliance in maintaining and improving his own health and the health of others.

3. Involve the promotion of school practices and a school environment which will serve to protect and foster the health of pupils and other school personnel.

4. Share in the projection of influence into the future years of the child through education into becoming a happy, healthy adult citizen of the community freely giving his services and leadership to others.

Educational Objectives Related to Health Services:

Health services experiences in schools should have educational goals. To achieve this there must be deliberately detailed planning for the cultivation of positive attitudes and understandings of pupils with reference to the experience. Instruction that both precedes and follows a health service procedure will help to realize educational objectives. Learning, however, will take place — whether or not intended, but the quality of the experience is controlled by the manner and procedure underlying the health service experience.

Health procedures *fail* to achieve any role in developing favorable attitudes when they are conducted coldly, clinically, and on a "Conveyor Belt" basis. Pupils are deeply concerned with their own well-being and are properly curious about both the nature and outcome of the health procedure.

Any pupil contact, to be meaningful and successful, begins with counseling on a person-to-person basis and, hopefully, goes on to the development of a teaching unit providing the opportunity for group instruction, discussion, and where possible, a demonstration of the procedure. Good teaching prior to any health service experience conducted by the teacher, physician, nurse or dentist will eliminate or certainly tend to reduce fears and apprehensions and will do much to contribute positively to his fund of knowledge. Each health service procedure possesses the potential to develop wholesome health understanding which should carry through to the prudent decisions that influence behavior.

School Health Services and The Home:

School health services supplement, but are no substitute for, the health care which parents should provide for their children. Rather than relieving parents of their responsibilities, these services are designed to encourage them to devote attention to their child's health, to acquaint them with health problems of which they may

be aware, and to encourage them to better utilize the services of their physician and dentist and community agencies. (5)

School health services recognize the primary responsibility of parents and guardians to provide home conditions conducive to physical and mental health, to secure needed medical and dental care, to encourage desirable health practices, and to see that children are decently clothed, adequately fed and housed. Supplementing parents' activities, the school aims to assure pupils in school the same type of health supervision that loving and thoughtful parents give them at home!

School Health Council:

The school health council is a representative body of responsible individuals concerned with the health of the students and school personnel. It should have representation from the administration, teachers, school doctors and nurses, sanitary and food service employees, parents, students and health agencies. This membership will vary in relation to school and community environment. There will be some differences in the urban, suburban and rural school health councils as the home, community, neighborhood and school influence the health behaviors of the student and school personnel.

The School Health Council's purpose shall be to evaluate, discuss, and recommend policy and/or direction in matters of health and health related problems involving normal day-to-day school living. These problems may be very broad and widely divergent in nature. They can range from mental health to school sanitation and from the health of bus drivers to the organization of instruction for speech correction.

The School Health Council may concern itself with the health problem of a single individual student as well as the total school population. It should create the attitudes and awareness for optimal healthful living in the school environment. The council does this through the administration, teaching staff and non-professional employees. It is a process of conditioning and promotion. Its goal should be nothing less than total involvement and cooperation by all pupils and school personnel.

The School Health Council must not lose sight of current needs for health services. It should not become a complacent, matter of fact functioning body of select personnel. The health council should, as a primary part of its function, direct its attention to the major health problems confronting students today.

Research in health services and education indicates that we have not yet exhausted the means whereby parents may be encouraged to seek medical help for problems which their children have. Twenty per cent of all children in need of health services are not receiving them. Revealing facts such as these are surprising and emphasize the need for a functional health council.

Every health council should carefully evaluate the functions of its school health program. Current national expenditures of hundreds of billions of dollars are being spent on screening, superficial diagnostic aspects and referral for cure. Such a gross amount of expenditure can surely find improved long-range effects through medical treatment in place of short term appraisals. When put to the test of value received for dollars spent, one can't help but encourage change or redirection. In too many community programs, the school health services represent a reiterative activity which identifies either obvious need or, having found previously unknown need, spends its total effort in the referral process. When thousands of nurses are employed on a full time basis, and thousands of physicians spend part of their professional time working in the school health service program, the services rendered to schools do not parallel the professional functions of nurses and doctors in industry, hospitals and rehabilitation centers. (3)

The School Health Council is responsible as a fact finding, evaluative body, to continue in providing the best available health service for students and school personnel.

It would not be practical nor within the fundamental intent of this manuscript to elaborate upon the myriad of health services performed by today's schools. Therefore, with this in mind, reference to specific health services will not appear in this guide.

To identify the legal basis for health services, school personnel should refer to the *School Laws of Pennsylvania,* Article XIV, School Health Services, Sections 1401 - 1422.

An evaluation of school health services and the responsibilities of schools in conducting other school health service programs can be found in *School Health Services,* edited by Charles C. Wilson, M.D., published by the National Education Association and the American Medical Association, 1964.

SCHOOL HEALTH ENVIRONMENT

Rationale:

School Health environment is related to all aspects of the school program with particular emphasis on various phases of the school environment affecting pupils as they live and learn at school. School health environment envelops all efforts to provide within the school physical, emotional, and social conditions which are beneficial to the health and safety of pupils. It includes the provision of a safe and healthful physical environment, the organization of a healthful school day, and the establishment of interpersonal relationships favorable to mental health.

A safe and healthful school environment is a necessary aid to all phases of school health and exemplifies the principles learned in the classroom. This includes not only the physical environment of the school and classroom, but also the daily program of activities and the personal and social relationships which are an influence on each individual. Healthy teachers are important factors in effective school living. The teacher's personal health habits play a great part in building a healthful school environment. All teachers should work to create a school environment that is physically and mentally healthy. Exemplar behavior and activity on the teacher's part is necessary in building a healthful school environment. It is only fair that teachers practice the health lessons taught their students. Young children are impressionable and will emulate the behavior of adults.

The school board and school administration are responsible for providing a healthful physical environment for personnel and pupils. The administration and teachers are not only responsible for the best educational use of the environment, but also for keeping the environment as healthy, safe and attractive as possible. Physicians, teachers, nurses, dietitians, and custodians all play important roles in total pupil health and the control of the school environment.

Environment in school living and its impact upon physical and emotional well-being for the learner requires careful study of all agencies which are concerned with the health of school children. The responsibilities of these agencies include the school site and plant, classrooms, gymnasiums, fields and equipment; lighting, heating, ventilation, school food services; sanitation; safety and fire prevention; mental and emotional tone and the health of school personnel.

Goals and Objectives:

1. To have all school personnel, including teachers, nurses, custodians, clerical workers, supervisors, special assistants, administrators and others cognizant of the social and emotional influences of people as a part of the environment.
2. To have all school personnel aware of the principles of healthful living by providing properly lighted, heated and ventilated facilities, healthfully and adequately equipped and maintained.
3. To have all who are concerned with children be aware of the individual needs and handle them for the child's best welfare; aware of the fact that the health and environment needs of the exceptional (gifted and handicapped) child is essential.
4. To have the teacher realize personality sets the emotional tone of the classroom and that enthusiasm, cheerfulness, personal habits and optimism of the healthy, well-adjusted teacher tends to create similar attitudes in pupils.
5. To encourage students to cooperate in maintaining a favorable environment, including harmonious relations with one another.
6. To have parents, as well as school personnel, have a share in the responsibility of maintaining a safe, attractive, sanitary, and hygienic school environment.
7. To have personnel and students secure in the knowledge that they are carefully protected from fire and other hazards.
8. To have the teachers, parents and pupils realize their responsibilities in such aspects as pupil transportation, including walking to school, traffic hazards and the release of pupils from school and school-controlled buses.

Responsibilities implied in School Health Environment begin with the conviction that controlled school environment is an imperative in the learning processes. It is a single, but vital, aspect of the total health triad.

As Figure B indicates, the school health program is a composite of Instruction, Services and Environment. A balanced interaction of these three areas is essential before complete and total programming can be implemented; and beyond that, be effective. No one area is sufficient to stand alone. For many years the concern of the health teacher has focused largely on the area of instruction, and primarily only that instruction which occurs within the confines of the classroom. Today's health education cannot remain this narrowly oriented. The program must include involvement of all possible resources from the home, community and the school if the

goal of meeting learner needs and relevancy is to be realized.

School personnel should refer to the Regulations of the State Board of Education of Pennsylvania, Chapter 3, School Buildings, and Chapter 4, Pupil Transportation, for the detailed regulations governing school health environment. Inquiries concerning Regulations of the State Board of Education should be referred to:

State Board of Education
216 Executive House
Harrisburg, Pennsylvania 17126

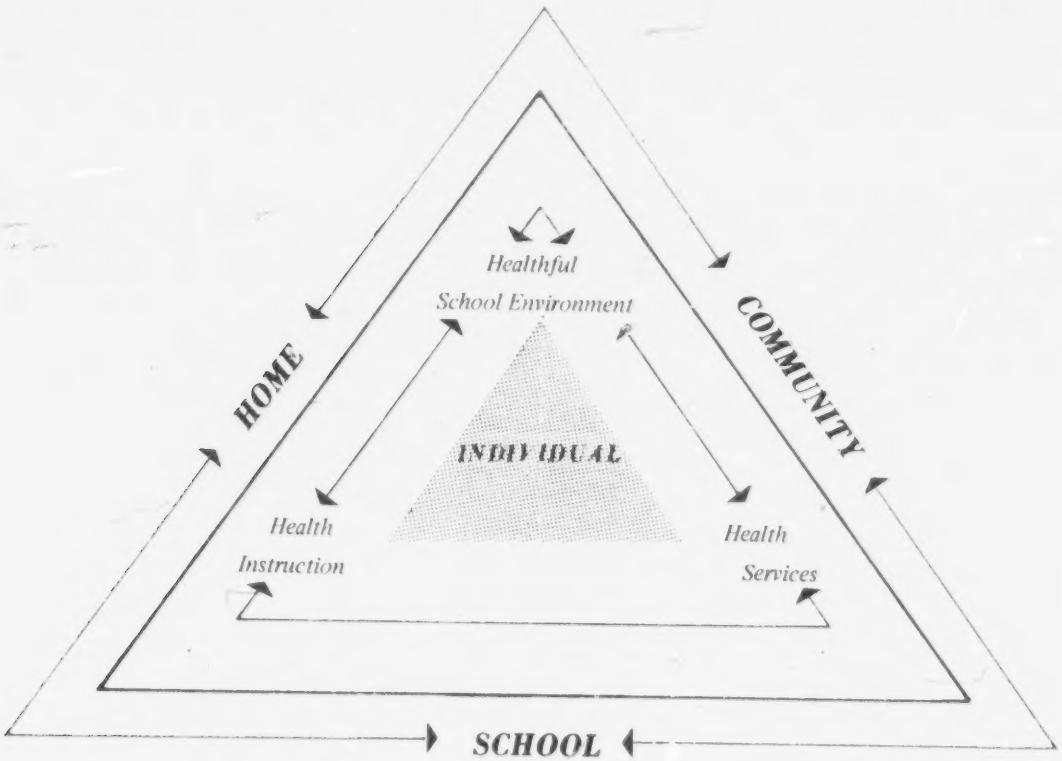

Figure B: School Health Triad

SCHOOL HEALTH SERVICES AND ENVIRONMENT

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this section.

1. Anderson, C.L., *School Health Practice*. (Saint Louis: The C.V. Mosby Company, 1960).
2. Fodor, John T. and Gus T. Dalis, *Health Instruction: Theory and Application*. (Philadelphia: Lea and Febiger, 1966).
3. Mayshark, Cyrus and Leslie W. Irwin, *Health Education in Secondary Schools*. (Saint Louis: The C.V. Mosby Company, 1968).
4. Moss, Bernice R.; W.H. Southworth and J.L. Reichert, Editors *Health Education*. (Washington, D.C. National Education Association, 1961).
5. Wilson, Charles C., F[illegible]r *School Health Services*. (Washington, D.C.: National Education Association and the American Medical Association, 1964).
6. National Education Association, American Medical Association. *Healthful School Living*. (Washington, D.C.: The Associations, 1957).

Section Six

Appendices

APPENDIX A

Selected Textbooks for Health Instruction

Selection of Textbooks for Development of the Health Curriculum:

Textbook selection is a cooperative process involving the local board of education, the administration, the classroom teachers and the parents. Primary responsibility for the adoption of textbooks is placed upon the administrators, supervisors and classroom teachers. A textbook selection committee should consist of 7 to 11 members from the above categories.

The Joint Committee of the National Education Association and the American Textbook Publishers Institute suggest the following kinds of goals as useful to textbook selection committees. (1)

INNOVATION — To bring about fundamental changes in courses of study. Textbooks can help bring about improvements in content, organization and teaching methods.

UP-TO-DATE CONTENT — To insure accurate and up-to-date content by selecting textbooks that include new concepts, insights, and facts.

PROVISION FOR INDIVIDUAL DIFFERENCES — To select textbooks that stimulate pupils grouped heterogeneously and those organized by levels or tracks.

GRADE TO GRADE DEVELOPMENT — To select those series of textbooks that provide for growth from grade to grade.

COURSE OF-STUDY CORRELATION — To select textbooks that best correlate with local or state course of study.

INSTRUCTIONAL ASSISTANCE — To select textbooks with the kind of supplementary aids that will best help teachers reach their highest level of efficiency.

INSPIRATION AND GROWTH FOR TEACHERS — To select textbooks that will encourage teachers to revise and improve their methods and that will inspire their work with the zeal and vigor that come from launching a new enterprise.

The following textbooks are by no means all of the available references, and any that are omitted should not be construed as being of inferior quality. They are included primarily to serve as an initial point of reference.

TEXTBOOKS FOR ELEMENTARY AND JUNIOR HIGH SCHOOL (2)

Textbook Series

American Book Company:

ABC Health Series. 55 Fifth Avenue, New York, New York 10003, Clifford L. Brownell, Ruth Evans, and Laurence B. HoEbson, M.D.

Grade	1	*All Day Every Day*	1959
	2	*Blue Skies*	1959
	3	*Come Rain, Come Shine*	1959
	4	*Among Friends*	1959
	5	*Broad Streets* (not available)	1959
	6	*Crossroads*	1959
	7	*About Your Health*	1959
	8	*Building Better Health*	1959

Teacher's guides are available

Benefic Press:

The Health Action Series. 1900 North Narragansett, Chicago, Illinois 60639, Charlotte Wilcox, Jeanne L. Brouillette, Edith McCall, and William Bolten, M.D.

Grade	1	*Come On*	1961
	2	*Here We Go*	1961
	3	*Step Lively*	1961
	4	*Good For You*	1961
	5	*Full of Life*	1961
	6	*Here's Health*	1961
	7	*Healthy Days*	1961
	8	*Stay Healthy*	1961

Teacher's notes and suggestions are included in the primary books.
Teacher's manuals for Grades 4-8 are available.

Boffs-Merrill Company, Inc.:

Health For Young America Series. 4300 West 62nd Street, Indianapolis, Indiana 46206, Charles C. Wilson, M. D. and Elizabeth A. Wilson.

Grade	1	*Health At School*	1965
	2	*Health Day by Day*	1965
	3	*Health For Fun*	1965
	4	*Health and Growth*	1965
	5	*Health and Living*	1965
	6	*Health and Happiness*	1965
	7	*Men, Science, and Health*	1965
	8	*Health, Fitness and Safety*	1965

Teacher's editions and manuals are both available.

Ginn and Company:

Health For Better Living Series. Statler Building, Back Bay, P.O. Box 191, Boston, Massachusetts 02117, Grace T. Hallock, Ross L. Allen, and Eleanor Thomas.

Grade	1	*Health and Happy Days*	1963
	2	*Health In Work and Play*	1963
	3	*Health and Safety For Tou*	1963
	4	*Growing Your Way*	1963

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	5	*Keeping Healthy and Strong*	1963
	6	*Teamwork For Health*	1963
	7	*Exploring The Ways of Health*	1963
	8	*On Your Own*	1963

Teacher's guides are available. Minor changes were made when this series was reprinted in 1963.

Laidlaw Brothers:
Laidlaw Health Series. Thatcher and Madison Street, River Forest, Illinois 60305, Oliver E. Byrd, M.D., Elizabeth A. Neilson, and Virginia D. Moore.

Grade	1	*Health 1*	1966
	2	*Health 2*	1966
	3	*Health 3*	1966
	4	*Health 4*	1966
	5	*Health 5*	1966
	6	*Health 6*	1966
	7	*Health 7*	1966
	8	*Health 8*	1966

This series comes in a regular edition and in a multi-ethnic edition. Teacher's editions are available.

Laidlaw Brothers:
The New Road To Health Series. Thatcher and Madison Street, River Forest, Illinois 60305, Oliver E. Byrd, M.D., Edwina Jones, Paul E. Landis, Edna Morgan, James S. Nicoll, Julia C. Foster, and William W. Bolton, M.D.

Grade	1	*First Steps to Health*	1963
	2	*Learning About Health*	1963
	3	*Habits for Health*	1963
	4	*Building for Health*	1963
	5	*Your Health*	1963
	6	*Growing In Health*	1963
	7	*Improving Your Health*	1963
	8	*Today's Health*	1963
	9-10	*Health Today and Tomorrow*	1963

Teacher's editions are available.

Lyons and Carnahan:
Dimensions In Health Series. 407 East 25th Street, Chicago, Illinois 60616, Leslie W. Irwin, Dana Farnsworth, M.D., Caroline Coonan, Sylvia Gavel, Florence Fraumeni, and Barbara Shafer.

Grade	1	*All About You*	1965
	2	*You and Others*	1965
	3	*Growing Every Day*	1965
	4	*Finding Your Way*	1965
	5	*Understanding Your Needs*	1965
	6	*Choosing Your Goals*	1965
	7	*Foundations for Fitness*	1965
	8	*Patterns for Living*	

The Grade 6 book is available in two editions. One contains material dealing with human reproduction; the alternate edition omits such references. The series is multi-ethnic. Teacher's editions are available.

There are two Unit Texts, for the junior high school level, also available in this series: *Venereal Diseases*, *Air and Water Pollution*. Both were published in 1966.

Lyons and Caranahan:
The My Health Book Series. A Text-Workbook Series. 407 East 25th Street, Chicago, Illinois 60616, Oliver R. Cornwell and Leslie W. Irwin.

Grade	3	*My Health Book*	1963
	4	*My Health Book*	1963
	5	*My Health Book*	1963
	6	*My Health Book*	1963
	7	*My Health Book*	1963
	8	*My Health Book*	1963

Teacher's editions are available.

Scott, Foresman and Company:
Curriculum Foundation Series. 1900 East Lake Avenue, Glenview, Illinois 60025 W.W. Bauer, M.D., Dorothy Baruch, Elizabeth Montgomery, Elenore Pounds, Wallace Wesley, Helen Shacter, and Gladys G. Jenkins.

Early Grade 1—*Just Like Me*

Grade	1	*Being Six*	1962
	2	*Seven or So*	1962
	3	*From Eight to Nine*	1962
	4	*Going On Ten*	1962
	5	*About Yourself*	1962
	6	*About All of Us*	1962
	7	*Growing and Changing*	1962
	8	*Advancing in Health*	1962

Teacher's editions are available.

Scott, Foresman and Company:
Health For All Series. 1900 East Lake Avenue, Glenview, Illinois 60025

Junior Primer—*Health For All*

Book	1	*Health For All*	1965
	2	*Health For All*	1965
	3	*Health For All*	1965
	4	*Health For All*	1965
	5	*Health For All*	1965
	6	*Health For All*	1965
	7	*Health For All*	1965
	8	*Health For All*	1965

The series is multi-ethnic. Teacher's editions are available.

JUNIOR HIGH SCHOOL TEXTBOOKS - NON-SERIES

Bauer, W. W., M.D. et al. *Health and Safety*. Glenview, Illinois: Scott, Foresman and Company, 1966. (Grade 9)

Glenn, Harold T. *Safe Living*. Peoria, Illinois: Charles A. Bennett Company, 1960. A workbook, *Safe Living Study Guide*, is also available. (Upper elementary and junior high school)

APPENDIX A

Jones, Evelyn G. *Enjoying Health*. Third edition, Philadelphia: The J. B. Lippincott Company, 1959. A teacher's guide is available. (Grade 8) (Senior High)

Sex Education Supplement: Call, Alice L. *Toward Adulthood*, 1964

_____, Betty L. Wright, and Reuben D. Behlmer. *Living in Safety and Health*. Philadelphia: The J. B. Lippincott Company, 1966. A workbook, teacher's guide, and tests are available. (Grade 9)

O'Keefe, Pattric R., et al. *Junior Health Horizons*. New York: Holt, Rinehart and Winston, 1960. A teacher's guide is available.

Sanders, Ardis and Homer Allen. *Safety Education For Modern Living*. A text-workbook. Fowler, Indiana: Benton Review Publishing Company, Inc., 1961. A teacher's guide is available. (Grade 8)

Smith, Gale and Ardis Sanders. *Workbook For Health Education In High School*. Fowler, Indiana: Benton Review Publishing Company, Inc., 1959. (Grade 7-9)

Williams, Dorothea M. *Building Health*. Philadelphia: The J. B. Lippincott Company, Inc., 1959. (Grades 7-8)

TEXTBOOKS FOR THE SECONDARY SCHOOL

Brownell, Clifford Lee, Ruth Evans, and Laurence B. Hobsen. *High School Health Science*. Chicago: American Book Company, 1961. A teacher's manual is available.

Diehl, Harold, M.D., Anita Laton and Franklin C. Vaughn. *Health and Safety For You*. Second edition, revised. New York: McGraw-Hill Book Company, 1964. A teacher's manual, tests, and correlated Text-Films are available.

Sex Education Supplement: Diehl, Harold D., Anita Laton, and Franklin C. Vaughn. *Families and Children*. 1955

Fait, Hollis F. *Health and Fitness for Modern Living*. Chicago: Allyn and Bacon, Inc., 1961. A teacher's manual and tests are available.

Gallagher, J. Rosewell, M.D., I. H Goldberger, M.D., and Grace T. Hallock. *Health For Life*. Boston: Ginn and Company, 1964. A teacher's manual and achievement tests are available.

Haag, Jessie Helen. *Health Education For Young Adults*. Austin, Texas: Steck-Vaughn Company, 1965. A teacher's manual is available.

Jamison, O. G., E. A. Johnson and R. Watson. *Building For Safe Living*. Fourth edition. (An activity-text-workbook.) Boston: D. C. Heath and Company, 1962. A teacher's manual is available.

Lawrence, Thomas Gordon, Jesse Williams Clemenson, and R. Will Bennett. *Your Health and Safety*. Fifth edition. Chicago: Harcourt, Brace and World, Inc., 1963. A teacher's manual and booklet of teaching tests are available.

Sex Education Supplement: Burnett, R. Will, Jesse Williams Clemenson and Howard S. Hoyman. *Life Goes On*. Second edition, 1959.

Lawrence, Thomas G.; Schriver, A.; Powers, Douglas F. and Vorhaus L. J. *Your Health and Safety*. Sixth Edition New York: Harcourt, Brace and World, Inc., 1969.

Leader, Barbara, Blanche R. Miller, Millard P. Robinson, Pattric Ruth O'Keefe and Cyrus H. Maxwell. *Health and Safety For High School Students*. New York: Holt, Rinehart, and Winston, Inc., 1959. A teacher's guide, tests, and workbook are available.

Meredith, Florence L., M.D., L.W. Irwin, and W. M. Staton. *Health and Fitness*. Fourth edition. Boston: D. C. Heath and Company, 1966. A teacher's manual, tests, and workbook are available.

Nicoll, James S., Julia C. Foster and William W. Bolton, M.D. *Health Today and Tomorrow*. River Forest, Illinois: Laidlaw Brothers, 1966. A teacher's manual is available. (Grades 9-10)

Sex Education Supplement: Boyer, Donald Allen. *For Youth To Know*. Basic Hygiene of Human Reproduction, 1966.

Ott, James H., Cloyd J. Julian and J. Edward Tether, M.D. *Modern Health*. New York: Holt, Rinehart, and Winston, Inc., 1963. A teacher's manual, tests, and workbook are available.

Sex Education Supplement: Morrison, Thomas F. *Human Reproduction*, 1963.

Rathbone, Josephine L., F. L. Bacon and C. H. Keene. *Health In Your Daily Living*. Second Edition. Boston: Houghton-Mifflin Company, 1958. A workbook is available.

Selected References and Resources

The following selected references and resources are suggested to supplement and enrich this section.

1. National Education Association and American Textbook Publishers Institute, Joint Committee. *Guidelines for Textbook Selection*. Revised edition. Washington, D. C.: National Education Association, 1967. p. 19.

2. Beyer, Mary K., Nolte, Ann E., and Solleder, Marian K. *A Directory of Selected References and Resources for Health Instruction*. Minneapolis: Burgess Publishing Company, 1966.

APPENDIX B

Directory of Book and Periodical Publishers

Abelard-Schuman, Ltd.:
6 W. 57th St., New York, New York 10019

Abingdon Press:
Nashville, Tennessee 37203

Academic Press, Inc.:
111 5th Avenue, New York 10003

Affiliated Publishers, Inc.:
630 5th Avenue, New York, New York 10029

Allyn and Bacon, Inc.
310 W. Polk Street, Chicago, Illinois 60601

American Association of Health, Physical Education and Recreation
1201 16th Street, N.W., Washington, D.C. 20000

American Book Company:
55 5th Avenue, New York, New York 10003

American Book Publishing Company:
Lancaster, Texas 77453

American Liberty Association:
50 East Huron Street, Chicago, Illinois 60611

American Optometric Association:
700 Chippewa Street, St. Louis, Missouri 63119

American Medical Association:
535 North Dearborn Street, Chicago, Illinois 60610

Appleton-Century-Crofts:
440 Park Avenue South, New York, New York 10016

Arco Publishing Company, Inc.:
219 Park Avenue South, New York, New York 10003

Association Press:
291 Broadway, New York, New York 10007

Atheneum Publishers:
162 East 38th Street, New York, New York 10016

Ballantine Books, Inc.:
101 5th Avenue, New York, New York 10003

Barnes and Noble, Inc.:
105 5th Avenue, New York, New York 10003

Basic Books, Inc.:
404 Park Avenue South, New York, New York 10016

Beacon Press, Inc.:
25 Beacon Street, Boston, Massachusetts 02108

Belmont Productions, Inc.:
66 Leonard Street, New York, New York 10013

Benefic Press:
1900 N. Narragansett, Chicago, Illinois 60639

Bobbs-Merrill Co., Inc.:
3 West 57th Street, New York, New York 10000

Brown, W.C. and Co.:
135 Locust Street, Dubuque, Iowa 52001

Building Research Institute:
1725 DeSales Street, N.W., Washington, D.C. 20036

Burgess Publishing Co.:
426 South 6th Street, Minneapolis, Minnesota 55415

Carlton Press, Inc.:
84 5th Avenue, New York, New York 10011

Children's Press, Inc.:
1224 West Van Buren Street, Chicago, Illinois 60607

Christopher Publishing House:
1140 Columbus Avenue, Boston, Massachusetts 02100

College and University Press:
263 Chapel Street, New Haven, Connecticut 06511

Columbia University Press:
2960 Broadway, New York, New York 10027

Consumer's Union, Mount Vernon, New York 10500

Cornell University Press:
124 Roberts Place, Ithaca, New York 14850

Conerstone Library, Inc.:
630 5th Avenue, New York, New York 10000

Coward-McCann, Inc.:
200 Madison Avenue, New York, New York 10016

Crowell, Thomas Y. Co.:
201 Park Avenue, New York, New York 10016

Crown Publishers, Inc.:
419 Park Avenue South, New York, New York 10016

Day, John Co.:
200 Madison Avenue, New York, New York 10016

Dell Publishing Co.:
750 Third Avenue, New York, New York 10017

Denison, T. S. and Co.:
Minneapolis, Minnesota 55400

Dial Press, Inc.:
750 Third Avenue, New York, New York 10017

Dodd, Mead and Co.:
432 Park Avenue South, New York, New York 10016

Doubleday and Company, Inc.:
501 Franklin Avenue, Garden City, Long Island, New York 11100

Dover Publications, Inc.:
180 Varick Street, New York, New York 10014

Emerson Books, Inc.:
251 West 19th Street, New York, New York 10011

Fawcett Publications, Inc.:
Fawcett Place, Greenwich, Connecticut 06830

Fell, Frederick, Inc.:
386 Park Avenue South, New York, New York 10016

Fleet Publishing Corporation:
230 Park Avenue, New York, New York 10017

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Follett Publishing Co.:
1010 West Washington Boulevard, Chicago, Illinois 60607

Frederick, William Press:
55 East 86th Street, New York, New York 10028

Freeman, W.H. and Co.:
660 Market Street, San Francisco, California 94104

Free Press; Division of Macmillan Co.:
866 Third Avenue, New York, New York 10022

Garrard Publishing Co.:
862 Scarsdale Avenue, Scarsdale, New York 10583

Ginn and Co.:
72 5th Avenue, New York, New York 10011

Golden Press, Inc.:
150 Parish Drive, Wayne, New Jersey 07470

Greenburg Publishers:
New York, New York 10000

Grossett and Dunlap, Inc.:
51 Madison Avenue, New York, New York 10010

Grossman Publishers, Inc.:
125 A. East 19th Street, New York, New York 10003

Grove Press, Inc.:
80 University Place, New York, New York 10003

Grune and Stratton, Inc.:
381 Park Avenue South, New York, New York 10016

Hale, E. M. and Co.:
Eau Claire, Wisconsin 54701

Harcourt, Brace and World, Inc.:
757 3rd Avenue, New York, New York 10017

Harvard University Press:
Cambridge Massachusetts 02138

Harper and Row Publishers, Inc.:
49 East 33rd Street, New York, New York 10016

Hawthorne Books, Inc.:
70 5th Avenue, New York, New York 10011

Heath, D. C. and Co.:
285 Columbus Avenue, Boston, Massachusetts 02116

Hillhouse Press:
Box 1386, Highland Park, New Jersey 08904

Hoeber, Harpers:
49 East 33rd Street, New York, New York 10016

Holiday House, Inc.:
8 West 13th Street, New York, New York 10011

Holt, Rinehart and Winston, Inc.:
383 Madison Avenue, New York, New York 10017

Houghton-Mifflin Co.:
2 Park Street, Boston, Massachusetts 02107

Indiana University Press:
10th and Morton Streets, Bloomington, Indiana 47401

Iowa State University Press:
Press Building, Ames, Iowa 50010

Julian Press, Inc.:
119 Fifth Avenue, New York, New York 10000

Knopf, Alfred A., Inc.:
501 Madison Avenue, New York, New York 10022

Laidlaw Brothers:
Thratcher and Madison Streets, River Forest, Illinois 60305

Lea and Febiger:
Washington Square, Philadelphia, Pennsylvania 19106

Lippincott, J. B. Co.:
East Washington Square,
Philadelphia, Pennsylvania 19105

Little, Brown and Co.:
34 Beacon Street, Boston, Massachusetts 02100

Lyons and Carnahan:
1716 Locust Street, Des Moines, Iowa 50303

McGraw-Hill Book Company, Inc.:
330 West 42nd Street, New York, New York 10036

McKay, David Co.:
750 3rd Avenue, New York, New York 10017

Macmillan Co.:
60 5th Avenue, New York, New York 10011

MacRae Smith Co.:
225 South 15th Street, Philadelphia, Pennsylvania 19102

Melmont Press:
1224 West Van Buren Street, Chicago, Illinois 60607

Meredith Press:
1716 Locust Street, Des Moines, Iowa 50303

Messner, Julian, Inc.:
8 West 40th Street, New York, New York 10018

Morrow, William and Company, Inc.:
425 Park Avenue, South, New York, New York 10016

Mosby, C. V.:
3207 Washington Boulevard, St. Louis, Missouri 63103

Merrill, Charles E., Books, Inc.:
1300 Alum Creek Drive, Columbus, Ohio 43216

National Research Council:
Washington, D. C. 20000

Nelson, Thomas and Sons:
Copewood and Davis Streets, Camden, New Jersey 08103

New York University Press:
Washington Square, New York, New York 10003

Norton W. W. and Co.:
55 5th Avenue, New York, New York 10003

Nutrition Foundation:
99 Park Avenue, New York, New York 10000

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Odyssey Press, Inc.:
55 5th Avenue, New York, New York 10003

Oxford University Press, Inc.:
417 5th Avenue, New York, New York 10016

Pantheon Books, Inc.:
22 East 51st Street, New York, New York 10022

Penguin Books, Inc.:
330 Clipper Mill Road, Baltimore, Maryland 21211

Pitman Publishing Corporation:
20 East 46th Street, New York, New York 10017

Platt and Munk Co., Inc.:
200 5th Avenue, New York, New York 10010

Pocket Books, Inc.:
1 West 39th Street, New York, New York 10018

Prentice-Hall, Inc.:
P. O. Box 500, Englewood Cliffs, New Jersey 07632

Princeton University Press:
Princeton, New Jersey 08540

Putman, G. P. and Sons:
200 Madison Avenue, New York, New York 10016

Rand McNally and Co.:
Box 7600, Chicago, Illinois 60680

Random House, Inc.:
457 Madison Avenue, New York, New York 10000

Ronald Press, The:
15 East 26th Street, New York, New York 10010

Rosen, Richards, Associates:
29 East 21st Street, New York, New York 10010

Rutgers Center of Alcohol Studies:
Publication Division, 566 Rutgers University, New Brunswick, New Jersey 08903

Rutgers University Press:
New Brunswick, New Jersey 08903

Saunders, W. B. Co.:
West Washington Square, Philadelphia, Pennsylvania 19106

Science Research Associates, Inc.:
57 West Grand Avenue, Chicago, Illinois 60610

Scott, Foresman and Co.:
433 East Erie Street, Chicago, Illinois 60611

Scott, William R., Inc.:
333 Avenue of the Americas, New York, New York 10014

Scribner, Charles and Sons:
597 5th Avenue, New York, New York 10017

Seale, E.C. Co., Inc.:
1053 East 54th Street, Indianapolis, Indiana 46220

Shoe String Press, Inc.:
Hamden Connecticut 06514

Simon and Schuster:
630 5th Avenue, New York, New York 10000

Singer, L. S. Co., Inc.:
Syracuse, New York 13200

Stanford University Press:
Stanford, California 94305

Sterling Publishing Co., Inc.:
419 Park Avenue South, New York, New York 10016

Thomas, Charles C.:
301-327 East Lawrence Avenue, Springfield, Illinois 62700

Time, Inc.:
Rochefeller Center, New York, New York 10020

Taplinger Publishing Co.:
29 East 10th Street, New York, New York 10003

Tudor Publishing Co.:
221 Park Avenue South, New York, New York 10003

University of Chicago Press:
5750 Ellis Avenue, Chicago, Illinois 60637

University of Florida Press:
15 North West 15th Street, Gainesville, Flordia 32601

University of Illinois:
Urbana, Illinois 61801

University of Minnesota Press:
Minneapolis, Minnesota 55455

United States Government Printing Office:
Washington, D. C. 20402

United States Naval Institute:
Annapolis, Maryland 21402

Vantage Press, Inc.:
120 West 31st Street, New York, New York 10001

Viking Press:
625 Madison Avenue, New York, New York 10022

Walck, Henry Z. Inc.:
19 Union Square West, New York, New York 10003

Warne, Frederick and Co., Inc.:
101 5th Avenue, New York, New York 10003

Watts, Franklin, Inc.:
575 Lexington Avenue, New York, New York 10022

Wharton:
New York, New York 10000

Whitman Publishing Co.:
Dept. M, 1220 Mound Avenue, Racine, Wisconsin 53404

Whittlesey House:
330 West 42nd Street, New York, New York 10036

Wiley, John and Sons:
605 Third Avenue, New York, New York 10016

Williams and Wilkens Co.:
428 East Preston Street, Baltimore, Maryland 21202

World Publishing Co.:
2231 West 110th Street, Cleveland, Ohio 44102

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Yale University Press:
149 York Street, New Haven, Connecticut 06511

Year Book Medical Publishers, Inc.:
35 East Wacher Drive, Chicago, Illinois 60601

PERIODICALS

American Journal of Cardiology:
Reuben H. Donnelley Corporation, 466 Lexington Avenue, New York, New York 10017

American Journal of Nursing:
American Journal of Nursing Company, 10 Columbus Circle, New York, New York 10000

American Journal of Physiology:
American Physiology Society, 9650 Rockville Pike, Bethesda, Maryland 20014

American Journal of Public Health and the Nation's Health:
American Public Health Association, 1740 Broadway, New York, New York 10019

American Recreation Journal:
American Recreation Society, 1404 New York Avenue, N.W., Washington, D.C.

Athletic Journal:
Athletic Journal Publishing Company, 1719 Howard Street, Evanston, Illinois 60202

Children:
Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

Consumers' Report:
The Consumers' Union, Mount Vernon, New York 10500

FDA Papers:
Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20000

Health Education Monographs:
Society of Public Health Educators, Health Education Service, 21 Center Street, Chatham, New York 12037

Journal of Alcohol Education:
Association for Advancement of Instruction About Alcohol and Narcotics, 212 South Grand Avenue, Lansing, Michigan 48900

Journal of the American Dental Association:
American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611

Journal of the American Dietetic Association:
American Dietetic Association, 620 North Michigan Avenue, Chicago, Illinois 60610

Journal of the American Medical Association:
American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

Journal of the American Optometric Association:
American Optometric Association, 7000 Chippewa Street, St. Louis, Missouri 63119

Journal of Health, Physical Education, and Recreation:
AAHPER, 1201 16th Street, N.W., Washington, D. C., 20036

Journal of Home Economics:
American Home Economics Association, 1600 Twentieth Street, Washington, D. C. 20009

Journal of Marriage and Family:
National Council of Family Relations, 1219 University Avenue, S.E., Minneapolis, Minnesota 55414

Journal of School Health:
American School Health Association, 515 East Main Street, Kent, Ohio 44240

Medical Bulletin on Tobacco:
American Public Health Association, 1740 Broadway, New York, New York 10019

Mental Hygiene:
The National Association for Mental Health, Inc., 10 Columbus Circle, New York, New York 10019

NEA Journal:
National Education Association, 1201 16th Street N.W., Washington, D. C.

Nursing Outlook:
American Journal of Nursing Company, 10 Columbus Circle, New York, New York 10019

Pa'thlete:
Pennsylvania Interscholastic Athletic Association, 1613 North Front Street, Harrisburg, Pennsylvania 17120

Parent's Magazine:
Parent's Institute, Inc., New York, New York

Physical Educator:
Phi Epsilon Kappa, 4000 Meadows Drive, Indianapolis, Indiana 46200

Public Health Reports:
Superintendent of Documents, United States Government Printing Office, Washington, D. C. 20402

Quarterly Journal of Studies on Alcohol:
Center of Alcohol Studies, Box 560, Rutgers University, New Brunswick, New Jersey 08903

Quarterly Cumulative Index, Medicus:
American Medical Association, Chicago, Illinois 60600

Recreation:
National Recreation Association, 8 West Eighth Street, New York, New York 10000

Red Cross World, The:
17 Chemin Des Crets, 1211, Geneva, Switzerland

Research Quarterly:
AAHPER, 1201 Sixteenth Street, N.W., Washington, D. C. 20036

Safety Education:
National Safety Council, School and College Department, 425 North Michigan Avenue, Chicago, Illinois 60611

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Scholastic Coach:
Scholastic Magazine, Inc., 50 West 44th Street, New York, New York 10000

School Health Review:
AAHPER, 1201 16th Street, N.W., Washington, D. C. 20036

School Lunch Journal:
American School Food Services Association, Box 10095, Denver, Colorado 80210

School Safety:
National Safety Council, 425 North Michigan Avenue, Chicago, Illinois 60600

Scientific American:
W. H. Freeman and Company, 660 Market Street, San Francisco, California 94100

SIECUS Newsletters and other Publications:
Sex Information and Education Council of the U. S., 1885 Broadway, New York, New York 10000

Today's Health:
American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610

World Health:
World Health Organization, Columbia University Press, International Documents Service, 2960 Broadway, New York, New York 10027

APPENDIX C

Directory of Film and Filmstrip Sources

Film References:

The Audio-Visual Research Institute: *The Audio-Visual Index,*
The Institute, 1346 Broadway, Detroit, Michigan 48226

A Directory of 2,660 16 mm Film Libraries,
United States Government Printing Office, Washington, D. C. 20402

Educational Film Guide,
H. H. Wilson, Company, 950 University Avenue, New York, New York 10452

Educator's Guide to Free Films,
Educators Progress Service, Randolph, Wisconsin 53956

NDEA Title III Filmstrips,
McGraw-Hill Book Company, Text Film Department, New York, New York 10000

1961 Supplement to the 1960 Catalog of Educational Motion Pictures:
Audio-Visual Center, Indiana University, Bloomington, Indiana 61701

Phonograph Records and Filmstrips.
Educational Record Sales, 157 Chambers Street, New York, New York 10000

Public Health Service Film Catalog,
Superintendent of Documents, United States Government Printing Office, Washington, D. C. 20402

Sources of Motion Pictures on Health:
American Medical Association, Department of Postgraduate Programs, Medical Motion Pictures and Television, 535 North Dearborn Street, Chicago, Illinois 60610

United States Government Film Services,
Du Art Film Laboratories, Inc., 245 West 55th Street, New York, New York 10000

Film Sources:

Aetna Life Affiliated Companies,
Information and Education Department, 151 Farmington Avenue, Hartford, Connecticut 10015

American Automobile Association,
Pennsylvania Avenue at 17th Street N.W., Washington, D. C. 20006

American Cancer Society, Pennsylvania Division, Inc.,
3309 Spring Street, Harrisburg, Pennsylvania 17111

American Dental Association, Bureau of Dental Health Education,
222 East Superior Street, Chicago, Illinois 60611

American Film Center,
P. O. Box 363, San Jose, California 95100

American Heart Association, Film Library (or Pennsylvania Heart Association)
44 East 23rd Street, New York, New York 10010

American Medical Association, Motion Picture Library,
535 North Dearborn Street, Chicago, Illinois 60610

American Optometric Association,
700 Chippewa Street, St. Louis, Missouri 63119

American Osteopathic Association,
212 East Ohio Street, Chicago, Illinois 60611

American Red Cross,
615 North St. Asaph Street, Alexandria, Virginia

Association Films, Inc.,
347 Madison Avenue, New York, New York 10000

Automotive Industries, Highway Safety Committee,
2000 K Street, N.W., Washington, D.C. 20036

Avis Films,
2409 West Olive Avenue, Burbank, California 91506

Bailey Films, Inc.,
c/o District Manager, 74, Abigail Adams Circle, Weymouth, Massachusetts 02191

Bell Film Library, Public Relations Department,
Bell Telephone Company of Pennsylvania Free Loan Film Library: 27 South 17th Street, Philadelphia, Pennsylvania 19100

Brandon Films,
200 West 57th Street, New York, New York 10000

Cahill, Charles, and Association, Inc.,
P. O. Box 3220, Hollywood, California 90028

Castle Films, Inc.,
445 Park Avenue, New York, New York 10000

Cenco,
2600 South Kostner Avenue, Chicago, Illinois 60623

Churchill Films,
662 North Robertson Boulevard, Los Angeles, California 90069

Coronet Films,
Coronet Building, 65 East South Water Street, Chicago, Illinois 60601

Davis, Sid, Productions,
1418 North Highland Avenue, Hollywood, California 90028

Douglas Film Industries,
10 West Kurgie Street, Chicago, Illinois 60611

Eastman Kodak Company,
Rochester, New York 14650

Employer's Mutuals of Wausau,
Safety Engineering Department, 407 Grant Street, Wausau, Wisconsin 55402

Encyclopedia Britannica, Educational Corporation,
425 North Michigan Avenue, Chicago, Illinois 60611

Film Associates of California,
11559 Santa Monica Boulevard, Los Angeles, California 90025

APPENDIX C

Films, Inc.,
1144 Wilmette Avenue, Wilmette, Illinois 60091

Ford Motor Company, Motion Picture Department,
The American Road, Dearborn, Michigan 48127

Food and Drug Administration,
United States Department of Health, Education and Welfare, Washington, D. C. 20024

Gateway Productions, Inc.,
1859 Powell Street, San Francisco, California 94133

General Electric Company,
Motion Picture Bureau, 1 River Road, Schenectady, New York 12300

Guidance Associates,
Harcourt, Brace and World, Pleasantville, New York 10570

Institute of Makers of Explosives,
420 Lexington Avenue, New York, New York 10017

International Association of Chiefs of Police,
1319 18th Street, N.W., Washington, D. C. 20000

International Film Bureau,
332 South Michigan Avenue, Chicago, Illinois 60604

Johnson and Johnson
c/o Director of Consumer Relations, 501 George Street, New Brunswick, New Jersey 08903

Kay Hanna,
Parents Committee, Box 23, Ithaca, New York 14850

Kimberly-Clark Corporation, Cellucotton Division,
Educational Department, Neeah, Wisconsin 54947

Lederle Laboratories, Film Library,
Division of American Cyanamid Company, Pearl River, New York 10965

Lowren Productions, Inc.,
4233 Wooster Avenue, San Mateo, California 94403

McGraw-Hill Book Company, Inc.,
Text Film Department, 330 West 42nd Street, New York, New York 10036

Metropolitan Life Insurance Company,
Health and Welfare Division, One Madison Avenue, New York, New York 10010

Modern Talking Picture Service, Inc.,
1212 Avenue of the Americas, New York, New York 10036

National Apple Institute,
2000 P Street, N.W., Washington, D. C. 20036

National Dairy Council,
111 North Canal Street, Chicago, Illinois 60606

National Film Board of Canada,
680 5th Avenue, New York, New York 10019

National Medical Audio-Visual Center,
National Library of Medicine, United States Public Health Service, Washington, D. C. 20025

National Safety Council,
425 North Michigan Avenue, Chicago, Illinois 60611

National Tuberculosis and Respiratory Disease Association,
1790 Broadway, New York, New York 10019

Pennsylvania Department of Health Film Library,
Box 90, Harrisburg, Pennsylvania 17120

Planned Parenthood Commission,
501 Madison Avenue, New York, New York 10022

Popular Science Publishing Company,
Audio-Visual Division, 335 Lexington Avenue, New York, New York 10017

Progressive Films,
1810 Francisca Court, Benicia, California 94510

Rosewell Park Memorial Institute,
Cigarette Cancer Committee, 666 Elm Street, Buffalo, New York 14203

Smith, Kline and French Laboratories,
Medical Film Center, 1500 Spring Garden Street, Philadelphia, Pennsylvania 19101

Social Science Films, Inc.,
1326 Devon Avenue, Los Angeles, California 90024

Society for Visual Education, Inc.,
1345 Diversey Parkway, Chicago, Illinois 60614

Teaching Film Custodians,
25 West 43rd Street, New York, New York 10036

University of California,
Extension Media Center, 2223 Fulton Street, Berkeley, California 94720

University of Southern California,
Department of Cinema, University Park, Los Angeles, California 90027

United States Department of Agriculture,
Human Nutrition Research Division, Washington, D. C. 20025

United States Department of Justice,
Washington, D. C. 20000

Universal Education and Visual Arts,
221 Park Avenue South, New York, New York 10036

Walt Disney Productions,
495 Route 17, P. O. Box 411, Paramus, New Jersey 07652

Wexler Film Products,
801 North Seward Street, Los Angeles, California 90038

Young American Films,
34 East Putnam Avenue, Greenwich Connecticut 06830

Filmstrip Sources:

American Bakers Association,
30 North Wacker Drive, Chicago, Illinois 60601

APPENDIX C

American Optometric Association,
700 Chippewa Street, St. Louis, Missouri 63119

Cereal Institute, Inc.,
Home Economics Department, 135 South LaSalle Street, Chicago, Illinois 60603

Curriculum Materials Corporation,
1319 Vine Street, Philadelphia, Pennsylvania 19107

DCH Educational Products, Inc.,
4865 Stenton Avenue, Philadelphia, Pennsylvania 19144

Elkins, H. M., Company
10031 Commerce Avenue, Tujunga, California 91042

Encyclopedia Britannica, Educational Corporation,
425 North Michigan Avenue, Chicago, Illinois 60611

Eye Gate House, Inc.,
146-01 Archer Avenue, Jamaica, New York 11435

Films, Inc.,
1140 Wilmette Avenue, Wilmette, Illinois 60091

Guidance Associates,
Harcourt, Brace and World, Pleasantville, New York 10570

Institute of Life Insurance, Education Division,
488 Madison Avenue, New York, New York 10019

Jam Handy Organization,
2821 East Grand Boulevard, Detroit, Michigan 48211

McGraw-Hill Book Company,
330 West 42nd Street, New York, New York 10000

Metropolitan Life Insurance Company,
School Health Bureau, Health and Welfare Division, 1 Madison Avenue, New York, New York 10010

Minnesota Mining and Manufacturing Company,
Education Service, Box 3100, St. Paul, Minnesota 55101

Popular Science,
330 West 42nd Street, New York, New York 10000

Society for Visual Education,
1345 Diversey Parkway, Chicago, Illinois 60611

Time, Inc.,
Rockefeller Center, New York, New York 10020

United States Public Health Services,
Communicable Disease Center, 605 Volunteer Building, Atlanta, Georgia 30300

Walt Disney, Capital Film Exchange
309 North 13th Street, Philadelphia, Pennsylvania or 800 Sonora Avenue, Glendale, California 91201

Young American Films
34 East Putnam Avenue, Greenwich, Connecticut 06830

APPENDIX D

Directory Of Sources Of Free And Inexpensive Health Education Materials

Voluntary Agencies and Professional Organizations:

Adult Education Association of the United States of America,
743 Wabash Avenue, Chicago, Illinois 60600

Allergy Foundation of America,
801 2nd Avenue, New York, New York 10017

Allied Youth Center, Inc.,
1346 Connecticut Avenue, N.W., Washington, D.C. 20015

Alcholics Anonymous,
General Services, P. O. Box 459, Grand Central Station, New York, New York 10017

American Association for Health, Physical Education and Recreation,
1201 16th Street N.W., Washington, D.C. 20036

American Association of Motor Vehicle Administrators,
839 17th Street, N.W., Washington, D.C. 20036

American Association for the Advancement of Science,
1515 Massachusetts Avenue, N.W., Washington, D.C. 20005

American Automobile Association (or local A.A.A.),
Pennsylvania Avenue at 17th Street, N.W., Washington, D.C. 20006

*American Cancer Society, Pennsylvania Division, Inc.,
3309 Spring Street, Harrisburg, Pennsylvania 17100

American Chemical Society,
1155 16th Street, N.W., Washington, D.C. 20036

*American Dental Association,
Bureau of Dental Health Education, 222 East Superior Street, Chicago, Illinois 60611

American Diabetes Association,
1 East 45th Street, New York, New York 10017

American Diabetic Association,
620 North Michigan Avenue, Chicago, Illinois 60611

American Foundation for the Blind,
15 West 16th Street, New York, New York 10000

*American Hearing Society,
919 18th Street N.W., Washington, D.C. 20006

American Heart Association, Inquiries Section,
44 East 23rd Street, New York, New York 10010

American Home Economics Association,
1600 20th Street, N.W., Washington, D.C. 20015

American Hospital Association,
840 North Lake Shore Drive, Chicago, Illinois 60611

American Institute of Family Relations
5287 Sunset Boulevard, Los Angeles, California 90027

American Insurance Association,
110 William Street, New York, New York 10038

*American Medical Association,
Bureau of Health Education, 535 North Dearborn Street, Chicago, Illinois 60610

*American National Red Cross,
Eastern Area (or local chapter) 615 North St Asaph Street, Alexandria, Virginia 22300

American Nurses' Association,
2 Park Avenue, New York, New York 10000

American Occupational Therapy Association,
250 West 57th Street, New York, New York 10000

*American Optometric Association, Inc.,
Department of Public Information, 700 Chippewa Street, St. Louis, Missouri 63113

American Osteopathic Association,
212 East Ohio Street, Chicago, Illinois 60611

American Physical Therapy Association,
1790 Broadway, New York, New York 10019

American Public Health Association,
1790 Broadway, New York, New York 10019

American Social Health Association,
1790 Broadway, New York, New York 10019

Arthritis Foundation, Central Pennsylvania Chapter,
Hall Building, 112 North Second Street, Harrisburg, Pennsylvania 17101

Association for the Aid of Crippled Children,
345 East 46th Street, New York, New York 10017

Association for Family Living,
32 West Randolph Street, Suite 1818, Chicago, Illinois 60601

Automotive Industries,
Highway Safety Committee, 200 K Street, N.W., Washington, D.C. 20015

Better Vision Institute, Inc.,
230 Park Avenue, New York, New York 10000

Center for Mass Communication,
Columbia University Press, 1125 Amsterdam Ave., New York, New York 10000

Child Study Association of America, 9 East 89th Street, New York, New York 10000

Epilepsy Information Center,
73 Fremont Street, Boston, Massachusetts 02100

*Evaporated Milk Association,
910 17th Street, N.W., Washington, D.C. 20036

Family Service Association of America,
44 East 23rd Street, New York, New York 10017

Health Information Foundation,
Public Relations Director, 420 Lexington Avenue, New York, New York 10017

Health Insurance Institute,
277 Park Avenue, New York, New York 10017

APPENDIX D

*H. J. Heinz Company,
P. O. Box 57, Pittsburgh, Pennsylvania 15230

Maternity Center Association,
48 East 92nd Street, New York, New York 10028

Mental Health Materials Center,
104 East 25th Street, New York, New York 10011

Multiple Sclerosis Society,
81 North Progress Street, Harrisburg, Pennsylvania 17126

Muscular Dystrophy Association of America, Inc.,
Public Information Department, 1790 Broadway, New York, New York 10019

National Academy of Sciences,
National Research Council, Washington, D. C. 20025

*National Apple Institute, Suite 410,
2000 P Street, N.W., Washington, D. C. 20036

National Association for Mental Health,
Director of Education and Program Services, 10 Columbus Circle, New York, New York 10019

National Association for Retarded Children, Inc.,
386 Park Avenue South, New York, New York 10000

National Better Business Bureau, Inc.,
230 Park Avenue, New York, New York 10017

National Commission on Safety Education,
National Education Association, 1201 16th Street, N.W., Washington, D.C. 20036

National Council on Alcoholism, Inc.,
2 East 103rd Street, New York, New York 10000

National Council on Family Relations,
1219 University Avenue, Minneapolis, Minnesota 55414

*National Dairy Council,
111 North Canal Street, Chicago, Illinois 60606

National Epilepsy League,
203 North Wabash Avenue, Chicago, Illinois 60610, 22nd Floor

*National Foot Health Council, Inc.,
321 Union Street, Rockland, Massachusetts 02370

National Foundation - Division of Scientific and Health Information
800 Second Avenue, New York, New York 10017

National Health Council,
1790 Broadway, New York, New York 10019

National Hemophilia Foundation,
175 Fifth Avenue, New York, New York 10010

National League for Nursing, Inc.,
2 Park Avenue, New York, New York 10016

National Multiple Sclerosis Society,
257 4th Avenue, New York, New York 10010

National Rifle Association,
1600 Rhode Island Avenue, Washington, D.C. 20006

National Safety Council,
School and College Department, 425 North Michigan Avenue, Chicago, Illinois 60611

National Society for Crippled Children and Adults, Inc.,
2023 West Ogden Avenue, Chicago, Illinois 60612

*National Tuberculosis and Respiratory Disease Association
1790 Broadway, New York, New York 10019

National Women's Christian Temperance Union,
1730 Chicago Avenue, Evanston, Illinois 60200

Outboard Boating Club of America,
333 North Michigan Avenue, Chicago, Illinois 60601

Pennsylvania Dental Association,
217 State Street, Harrisburg, Pennsylvania 17100

*Pennsylvania Heart Association,
2743 North Front Street, Harrisburg, Pennsylvania 17110

Pennsylvania League for Nursing,
1801 North Front Street, Harrisburg, Pennsylvania 17100

Pennsylvania Medical Society,
230 State Street, Harrisburg, Pennsylvania 17100

Pennsylvania Mental Health Association,
1601 Walnut Street, Room 214, Philadelphia, Pennsylvania 19100

Pennsylvania Optometric Association,
218 North Street, P. O. Box 1201, Harrisburg, Pennsylvania 17100

Pennsylvania Society for Crippled Children and Adults, Inc.,
1107 North Front Street, P. O. Box 290, Harrisburg, Pennsylvania 17108

Pennsylvania Tuberculosis and Respiratory Disease Association.
311 South Juniper Street, Room 1000, Philadelphia, Pennsylvania 19107

Planned Parenthood Federation of America, Inc.,
515 Madison Avenue, New York, New York 10022

Public Affairs Committee, Inc.,
381 Park Avenue South, New York, New York 10016

Rutgers University Center of Alcohol Studies,
Smithers Hall, Box 554, New Brunswick, New Jersey 08903

School Health Education Study,
Washington, D. C. 20000

Science Research Associates,
259 East Erie Street, Chicago, Illinois 60611

SIECUS (Sex Information and Education Council of the United States)
1885 Broadway, New York, New York 10023

United Cerebral Palsy Association, Inc.,
369 Lexington Avenue, New York, New York 10017

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Yale Center for Alcohol Studies,
52 Hillhouse Avenue, Yale Station, New Haven, Connecticut 06520

Commerical Agencies:

Abbott Laboratories,
14th and Sheridan Road, North Chicago, Illinois 60604

*Aetna Life Affiliated Companies,
Information and Education Department, 151 Farmington Avenue, Hartford, Connecticut 10015

Allstate Insurance Company,
Accident Prevention Department, Allstate Plaza, Northbrook, Illinois 60062

*American Automobile Association,
Safety Department, 85 John Street, New York, New York 10038

American Can Company,
Home Economics Section, 100 Park Avenue, New York, New York 10017

American Dairy Association,
20 North Wacker Drive, Chicago, Illinois 60607

American Dry Milk Institute, Inc.,
221 North LaSalle Street, Chicago, Illinois 60601

American Fire Insurance Companies,
Engineering Department, 80 Maiden Lane, New York New York 10007

American Home Economics Association,
1600 20th Street, N.W., Washington, D.C. 20036

*American Institute of Baking,
Consumer Service Department, 400 East Ontario Street, Chicago, Illinois 60611

*American Insurance Association,
Engineering and Safety Department, 85 John Street, New York, New York 10038

American Meat Institute,
59 East Van Buren Street, Chicago, Illinois 60605

American Trucking Associates, Inc.,
Public Relations Department, 1616 P Street, N.W., Washington, D.C. 20036

American Visuals Corporation,
381 Park Avenue South, New York, New York 10000

Amurol Products Company,
Naperville, Illinois 60540

*Armour and Company,
Public Relations Department, 401 North Wabash Street, Chicago, Illinois 60690

Association of American Railroads,
School and College Service, Transportation Building, Washington, D.C. 20006

*Association of Casualty and Surety Companies,
Accident Prevention Department, Publications Division, 60 John Street, New York, New York 10038

Berks and Company,
22 East 60th Street, New York, New York 10022

B.F. Goodrich Company,
500 South Main Street, Akron, Ohio 44318

*Bicycle Institute of America,
122 East 42nd Street, New York, New York 10017

Block Drug Company,
Py-Co-Pay Division, 105 Academy Street, Jersey City, New Jersey 07302

The Borden Company,
Consumer Services, 350 Madison Avenue, New York, New York 10011

Bristol-Myers Products Company,
Educational Service Department, 45 Rockefeller Plaza, New York, New York 10000

Carnation Milk Company,
Home Service Department, 5045 Wilshire Boulevard, Los Angeles, California 90036

*Cereal Institute, Inc.,
Home Economics Department, 135 South LaSalle Street, Chicago, Illinois 60603.

Chiclecraft, Inc.,
P.O. Box 2229, Knoxville, Tennessee 37900

Colgate-Palmolive Company,
300 Park Avenue, New York, New York 10010

Connecticut Mutual Life Insurance Company,
Hartford, Connecticut 06100

DCA Educational Products, Inc.,
4865 Stenton Avenue, Philadelphia, Pennsylvania 19144

Dental Digest, Inc.,
1005 Liberty Avenue, Pittsburgh, Pennsylvania 15200

Educators Mutual Life Insurance Company,
Educational Service Department, P. O. Box 149, Lancaster, Pennsylvania 17604

*Employers Mutual of Wausau,
Safety Engineering Department, 407 Grant Street, Wausau, Wisconsin, 55402

*Equitable Life Assurance Society of the United States,
Bureau of Public Health, 1285 Avenue of the Americas, New York, New York 10019

*Florida Citrus Commission,
Production Department, Lakeland, Florida 33802

Food Wonders of the World,
P.O. Box 773, Detroit, Michigan 48232

Ford Motor Company,
Research and Information Department, The American Road, Dearborn, Michigan 48127

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General Biological Supply House,
Chicago, Illinois 60601

*General Mills, Inc.,
Public Relations Department, Educational Services, 9200 Wayzata Boulevard, Minneapolis, Minnesota 55440

General Motors Education Aids,
General Motors Building, Detroit, Michigan 48202

Goodyear Tire and Rubber Company,
Public Relations Department, 1144 East Market Street, Akron, Ohio 44316

Institute of Markers of Explosives,
420 Lexington Avenue, New York, New York 10017

Insurance Institute for Highway Safety,
1710 H Street N.W., Washington, D.C. 20037

International Apple Association,
1302 Eighteenth Street N.W. Washington, D.C. 20036

International Cellucotton Products, Company,
919 North Michigan Avenue, Chicago, Illinois 60611

*International Harvester Company,
180 North Michigan Avenue, Chicago, Illinois 60601

*John Hancock Mutual Life Insurance Company,
Health Education Service, 200 Berkeley Street, Boston, Massachusetts 02116

Johnson and Johnson,
c/o Director, Consumer Relations, 501 George Street, New Brunswick, New Jersey 08902

*Kellogg Company,
Home Economics Service, Battle Creek, Michigan 49015

Kemper Insurance Company,
4750 Sheridan Road, Chicago, Illinois 60640

*Kimberly-Clark Corporation,
Cellucotton Division, Educational Department, Neenak, Wisconsin 54947

Lactona Products,
Warner-Lambert Pharmaceutical Company, 201 Tabor Road, Morris Plains, New Jersey 07950

Lederle Laboratories Division,
American Cyanimid Company, Public Relations Department, Pearl River, New York 10965

Lever Brothers Company,
Public Relations Division, Consumer Education Department, 390 Park Avenue, New York, New York 10022

Liberty Mutual Insurance Company,
175 Berkley Square, Boston, Massachusetts 02116

Licensed Beverage Industries, Inc.,
155 East 44th Street, New York, New York 10017

Merck, Sharp and Dohme,
Division of Merck and Company, Inc., West Point, Pennsylvania 19486

*Metropolitan Life Insurance Company,
School Health Bureau, Health & Welfare Division, 1 Madison Avenue, New York, New York 10010

Minnesota Mining and Manufacturing Company,
2501 Hudson Road, St. Paul, Minnesota 55119

National Board of Fire Underwriters,
85 John Street, New York, New York 10038

National Dairy Council,
111 North Canal Street, Chicago, Illinois 60606

*National Fire Protection Association,
60 Batterymarch Street, Boston, Massachusetts 02110

National Foot Health Council, Inc.,
321 Union Street, Rockland, Massachusetts 02370

*National Livestock and Meat Board,
Nutritional Department, 407 South Dearborn Street, Chicago, Illinois 60605

National Rifle Association of America,
1600 Rhode Island Avenue, N.W., Washington, D.C. 20000

Nationwide Insurance,
Safety Department, 246 North High Street, Columbus, Ohio 43215

*Nutrition Foundation,
99 Park Avenue, New York, New York 10016

Oral Hygiene Publications,
1005 Liberty Avenue, Pittsburgh, Pennsylvania 15234

*Pepsodent, Division of Lever Brothers, Company,
390 Park Avenue, New York, New York 10022

*Personal Products Corporation,
Educational Department, Milltown, New Jersey 08850

Pet Milk Company,
Director of Home Economics, 1401 Arcade Building, St. Louis, Missouri 63101

Pharmaceuticals Manufacturers Association,
115 Fifteenth Street, N.W., Washington, D.C. 20005

*Proctor and Gamble Professional Service,
P.O. Box 171, Cincinnati, Ohio 45201

Prudential Insurance Company of America,
Public Relations & Advertising, Newark, New Jersey 07102

Ralston Purina Company,
Checkerboard Square, St. Louis, Missouri 63199

*Scott, Foresman and Company,
433 East Erie Street, Chicago, Illinois 60611

Smith, Kline and French,
Public Relations, 1500 Spring Garden Street, Philadelphia, Pennsylvania 19101

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Sunkist Growers,
Consumer Services Division, Box 2706 Terminal Annex, Los Angeles, California 90054

Swift and Company,
Agricultural Research Department, 115 West Jackson Boulevard, Chicago, Illinois 60604

*Tampax, Inc.,
161 East 42nd Street, New York, New York 10017

The Tea Council of the United States of America,
16 East 56th Street, New York, New York 10022

*Travelers' Insurance Companies,
Public Information and Advertising Department, 700 Main Street, Hartford, Connecticut 06115

*United Fruit Company,
Education Department, 30 Saint James Avenue, Boston, Massachusetts 02100

The Upjohn Company,
Trade and Guest Relations Department, Kalamazoo, Michigan 49001

*Wheat Flour Institute,
309 West Jackson Boulevard, Chicago, Illinois 60606

Whitehall Laboratories, Inc.,
685 Third Avenue, New York, New York 10022

Official Agencies:

American Association for Health, Physical Education and Recreation,
1201 16th Street, N.W., Washington, D. C. 20036

Atomic Energy Commission,
P.O. Box 62, Oakridge, Tennessee 37830

Bureau of Narcotics,
United States Department of the Treasury, Food and Drug Administration, Washington, D.C. 19106

Bureau of Commercial Fisheries,
Department of the Interior, Washington, D. C. 20025

Chief Postal Inspector,
United States Post Office Department, Washington, D. C. 20260

Commonwealth of Pennsylvania, Agricultural Extension Service,
Pennsylvania State University, State College, Pennsylvania 16802

Department of Motor Vehicles,
Traffic Safety Division, Harrisburg, Pennsylvania 17126

Heart Disease Control Program, Division of Special Health Services, United States Public Health Service,
Department of Health, Education and Welfare, Washington, D.C. 20025

Heart Information Center, National Heart Institute,
United States Public Health Service, Bethesda, Maryland 20014

Narcotics Education, Inc.,
Washington, D.C. 20000

National Academy of Sciences,
National Research Council, Food and Nutrition Board, Washington, D.C. 20000

National Center for Chronic Disease Control,
Office of Information, 4040 North Fairfax Drive, Arlington, Virginia 22203

*National Commission on Safety Education,
National Education Association, 1201 16th Street, N.W., Washington, D.C. 20036

National Institutes of Health,
Department of Health, Education and Welfare, United States Public Health Service, Bethesda, Maryland 20014

National Education Association,
Department of Classroom Teachers, 1201 16th St., N.W. Washington, D.C. 20036

National Recreation and Park Association,
1700 Pennsylvania Avenue, N.W., Washington, D. C. 20006

Office of Civil Defense,
Secretary of the Army, Pentagon, Washington, D. C. 20310

Pennsylvania Bureau of Publications,
10th and Market Streets, Harrisburg, Pennsylvania 17126

Pennsylvania Department of Health,
Health and Welfare Building, Box 90, Harrisburg, Pennsylvania 17120

Pennsylvania Department of Health - Regional Offices

Region I
Room 206, State Office Building
1400 West Spring Garden Street
Philadelphia, Pennsylvania 19130

Region II
383 Wyoming Avenue
Kingston, Pennsylvania 18704

Lower District
401 Buttonwood Street
West Reading, Pennsylvania 19602

Region III
1105 Herr Street
Harrisburg, Pennsylvania 17103

Region IV
734 West 4th Street
Williamsport, Pennsylvania 17701

Region V
Room 505, State Office Building
300 Liberty Avenue
Pittsburgh, Pennsylvania 15222

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Region VI
996 South Main Street
Meadville, Pennsylvania 16335

Pennsylvania Department of Public Instruction,
Education Building, Box 911, Harrisburg, Pennsylvania 17126

Pennsylvania State Liquor Control Board,
Harrisburg, Pennsylvania 17126

President's Council on Physical Fitness,
Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Public Health Service,
Public Inquiries Branch, Washington, D.C. 20201

Superintendent of Documents,
United States Government Printing Office,
Washington, D.C. 20025

United States Department of Agriculture,
Agricultural Research Administration, Bureau of Human Nutrition and Home Economics, Hyattsville, Maryland 20782

United States Department of Health, Education and Welfare,
Washington, D.C. 20201

*Asterisks indicate sources of free and inexpensive charts, posters or models available to the teacher upon request.

APPENDIX E

LAWS AND REGULATIONS

Owing to periodic changes in laws and regulations, through amendments and revisions, those pertaining to health education have been omitted. The Curriculum Regulations and School Laws are available upon request by writing to the following address:

Office of Public Information and Publications
Department of Education
Box 911
Education Building
Harrisburg, Pennsylvania 17126

APPENDIX F

Educational Television

For thorough utilization of educational television the interested teacher should seek the cooperation of the building principal. District participation, through the educational television subscription, should be the first step in securing educational television services. For all subscribing districts a list of scheduled educational television programs for the school year is provided. Should programs not appear which you feel are relevant to your area of interest, an inquiry to the station manager nearest you may prove helpful in future program planning.

Most programs designed for instruction have a study guide or manual prepared for the teacher. Such a guide provides for communication with the television teacher and also includes the purpose and content of each lesson, material required, and suggestions for discussions and follow-up activities. The study guides are available to the teacher by writing to the broadcasting station. Addresses of Pennsylvania's seven educational television stations are listed below. Inquiries concerning programs should be directed to the station manager.

Students should be prepared for the television lesson by reviewing the main objectives of the lesson and what they are to look for. The teacher's study guide will supply this information before air time.

During the television lesson the classroom teacher should set the example for the student by being an alert, interested and responsive viewer. At this time points of instruction and ideas can be noted in the teacher's study guide for further reference.

To continue the learning process, a follow-up of the television lesson is necessary. Students should have the opportunity to ask questions, share their opinions and discuss problems. Suggestions for future learning activities may come from the television teacher, the study guide, or your own creativity.

ETV Stations and Counties Receiving Service

WHYY
548 Market Street
Philadelphia, Pennsylvania 19139

Broadcast area includes Philadelphia, Delaware, and parts of Chester, Montgomery, and Bucks Counties.

WITF
Box 2
Hershey, Pennsylvania 17033

Broadcast area includes Dauphin, Cumberland, York, Lancaster, Lebanon, Perry, Adams, Franklin, and Juniata Counties.

WLVT
South Mountain Drive, West
Bethlehem, Pennsylvania 18015

Broadcast area includes Northampton, Lehigh, Berks, Schuylkill, Carbon, Monroe, and Pike Counites.

WPSX
201 Wagner Building
University Park, Pennsylvania 16802

Broadcast area includes Centre, Clearfield, Clinton and Mifflin Counties.

WQED
4337 Fifth Avenue
Pittsburgh 13, Pennsylvania 15213

Broadcast area includes Allegheny, Beaver, Butler, Westmoreland, Washington, Greene, Fayette, Armstrong, Indiana, Lawrence, Mercer, Venango, Clarion and Jefferson Counties.

WVIA
Box 4444
Scranton, Pennsylvania 18509

Broadcast area includes Luzerne, Lackawanna, Wayne, Wyoming, Columbia, Montour, Northumberland, Snyder, Union and Lycoming Counties.

WQLN
P. O. Box 3116
Erie, Pennsylvania 16500

Broadcast area includes Erie, Warren, Crawford and Forest Counties.